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MY IDEAL CLINIC FOR DISEASES OF THE SKIN *

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It is a commonplace to say that within the past twenty years hospitals and hospital management have changed radically. As new facts in medicine and surgery appear, the hospitals keep pace by adding new clinics to utilize the new discoveries. The clinics, even the old ones, reflect the progress. The clinic chief, like the hospital chief, must continually add to his staff and equipment.

Various unrelated occurrences during the past year have caused me to make a more than usually critical survey of our dermatologic clinic at the Massachusetts General Hospital in Boston.

PLENTY OF ROOM NECESSARY

In my ideal clinic there must be, first of all, plenty of room. To my mind nothing hinders good work more than cramped quarters. There is also a distinct efficiency value in neatness and attractiveness. Business men now generally recognize the fact that clerks and other employees do better work under pleasant conditions. Industrial physicians will tell you that the health index is higher and the morale better in stores which are clean, well lighted, well ventilated and attractive.

The same applies equally well to the rooms in which we have to do our medical work.

Often in the past we have considered only the physicians in the clinic. In these days of psychology and suggestion, we must not forget the patient. He visits the clinic for relief from sickness. What must be the effect on a patient who must wait his turn to see the physician in a dark, crowded waiting room, without air or light, often filled with, to say the least, none too clean people. If nothing else, it is good advertising to have the waiting rooms large and bright and clean.

PRIVACY DESIRABLE

The next step in the patient's progress is to the consulting room. Here he should be received with as much privacy as possible. To my mind, he has a right to this. He should not be compelled to tell his

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story and to be examined in the presence of a mob of physicians and curious patients. His troubles are his own, and should not be published to the world at large. Many a time I have seen a patient examined and questioned in a room in which several other patients were undergoing a similar ordeal, while all about were other waiting patients with their ears wide open. How is it possible, under such conditions, either to get a full and fair history from the patient, or to give him careful instructions? Too often the patient reserves the most intimate part of his story. Too often his attention is so diverted by the presence of so many listeners that he hears little of the directions given him. Is he then to be blamed if later he fails to carry out the physician's orders? We have tried both methods, first publicity, later privacy, at the Massachusetts General Hospital. The results are infinitely better when the physician and the patient are alone where the examination can be made in peace and quiet, and where the patient can give his full attention. This is not Europe. In America, "a man's a man for a' that."

From the physician's point of view too, the private consulting and examining room is far superior to the public room. The rustle and noise of many coming and going and the tumult of voices from many conversations are missing when the examining room is private. Here one can give such serious, thoughtful consideration to the case as is quite impossible in the public room. The saving in nervous wear and tear alone makes the private room desirable for the physician.

Teaching usually presents more or less of a problem. If it is conducted openly in the consulting room itself, it introduces another element of confusion and inevitably slows down the work of the clinic, the very things the ideal clinic should avoid. The remedy for that difficulty is, it seems to me, to have one or more rooms in the suite devoted entirely to class purposes. It is easy to usher the patient from the clinic to the class, and neither is disturbed. With us this method has been tried now for some years, and works exceedingly well. The full material of the clinic is at the call of the instructor even more than by the older method. He merely indicates to the clinic workers what type of cases he wishes to show, and they supply the cases when they are wanted.

CLINIC STAFF AND WORK

Next, how many should there be on the staff? The answer is not easy, as it depends on so many different factors. There should of course be a sufficient number of physicians to carry on the clinical work with ease. Roughly estimated, I should say that one man doing purely clinical work can see and give sufficiently adequate attention to a maxiumum of fifteen patients an hour. If he had a secretary to take his notes from dictation, he might see a few more. Given, then, this average maximum capacity, the number of men needed in a given clinic can easily be com-

puted. It is well to remember in this connection that no man can work at top speed all the year round. Therefore, it is wise to plan on a double staff that they may relieve each other at previously determined intervals. I think six months of continuous active service is about the limit of one's best effort.

Another matter of some importance is so to distribute the clinical work that both patients and physicians may receive the utmost benefit. This can be accomplished by an arrangement which permits the physician who sees a patient first to follow the case through to the end. In this wise, study and investigation are fostered on the part of the physician and a more intelligent, more uniform and logical course of treatment is received by the patient. In my own clinic, we try to accomplish this by placing our initials on the record card at the time of the first visit. Thereafter the patient is considered that physician's patient, and is referred to him at each subsequent visit.

It often happens that the clinic worker finds that the patient needs special treatment in one form or another. The physician who saw the patient first then prescribes in writing what is needed, and sends the patient with the prescription to the proper place. In this wise, the treatment is kept intact and in a logical whole. Unless there is this one man control, it is our experience that the treatment often becomes hopelessly confused and tangled. With one man in control, the patient receives one or another form of light therapy or vaccine therapy, or has a blood count taken or a biopsy made by assistants whose work it is to attend to these special features. Each subdepartment is under some one man especially skilled, who causes a note to be included in the patient's record which states in detail what his subdepartment has done or found. In this manner, everything about the patient has been made a matter of record, so that it is easy for the man in control to read all that is known about the case at any given time.

It will at times be necessary to have special work done, special examinations made, or special forms of treatment given. This can best be done in the respective special clinics. Our clinic must therefore have the closest connection with all the other departments of the hospital, not only that these things may be done, but also that, having been done, we may have the information obtained available for our use.

An efficient method is in use at the Massachusetts General Hospital. At the time of entrance to the hospital, a record card is made out in the patient's name and stamped with the name of the department to which he is first sent. Wherever he goes thereafter, his record card goes with him. When he is sent from one department to another, his record is also sent. Each new department has its own stamped card on which it makes its own notes. When it has filled out its own card, it is attached to the card of the department of origin, so that, in a given case,

the patient's record may consist of a number of cards from different hospital departments all clamped together. Whenever the patient goes to any particular department, the physician has always before him not only his own record but also the records of all the departments which, combined, cover the whole case.

SOCIAL SERVICE AND THE VISITING NURSE

There's a sermon as well as a suggestion in the phrase to "carry the hospital to the home," which Dr. Richard C. Cabot used when he established social service work at the Massachusetts General Hospital. Dr. Cabot saw that it was not enough to hand a prescription to a patient visiting a hospital department and then to send him on his way. That was only a part of the job of getting him well. He needed, in most instances, home instruction. He might have no money with which to have the prescription filled. He might lack clothes or food, or his home might be insanitary. Therefore a corps of workers and instructors were needed to go out from the hospital to visit the patient in his home and to look into these things. When anything was wrong, steps were taken immediately to have the wrong corrected. Prescriptions were filled. Clothes and food were provided. More sanitary homes were found. Cleanly methods of living were taught. Instruction in home cooking and dietetics were given when necessary. Finally, appropriate agencies of helpfulness were introduced, after the first period of hard sledding had been tided over, by which the patient was looked after until he could care for himself. In a great variety of such ways, the social service supplemented the work of the physicians of the clinic. It is an immensely helpful service which has grown and spread until now every hospital in Boston has a similar service of its own.

I wish to speak now of a visiting nurse as a feature of the ideal clinic.

For some time, we were fortunate enough, through the courtesy and cooperation of the social service department, to enjoy the help of one and sometimes two of its social workers. They demonstrated their value to our clinic at the outset. But to me they lacked one thing, a knowledge of how to carry out the treatment of patients with diseases of the skin. In those days, less was known about dermatology, and the pubic feared all skin diseases even more than it does today. The idea occurred to me to send one of our trained nurses with the social worker and let the one attend to the medical end of the case and the other to the social. Thanks to a friend of the hospital, we were enabled to do this. He financed a visiting nurse for the skin department for five years. I am happy to say that by her works she has persuaded the hospital authorities to take her under their official wing.

For about two years, the nurse and the worker visited our patients together. This was the transition period when each had much to learn from the other. Little by little our nurse learned social work, and how to set its machinery in motion, so that today the nurse visits the patients alone. When she finds any social work necessary, she calls in the social worker.

From the earliest days, we have followed certain fixed rules in our nursing service, which time has only served to solidify, with but few modifications and changes.

First, the visiting nurse must always be the nurse. Her duty is to see that the medical treatment is carried out as ordered in the clinic. Her first duty on reaching the house is to attend to the patient. While doing this, she instructs him or some one in the family how to perform the necessary acts. She continues her lessons until she is sure that the treatment will be successfully and carefully carried out by some one of the household.

After the patient is attended to, the next duty of the visiting nurse is to examine the others of the family, if the case is one of contagious disease, such as, for example, scabies. This is a necessary and wise provision, for by it a long step is taken in the prevention of reinfection. In instance after instance, whole families are found to be infected. These the nurse orders—and they go—to the hospital for medical treatment, or, now that she has become in these things as skilful as the physicians in the clinic, she treats them herself.

In contagious diseases, disinfection is of course a necessary measure if cure is to be permanent and the further spread of the contagion is to be checked. I well remember how delighted I was when the visiting nurse reported to me one morning how she had taught disinfection to one family with scabies. She had asked for a washtub and found they had none. She sent to the neighbors to borrow and found none. Not to be balked, she went out and bought a washtub. Then she proceeded to teach the family how to boil and how to wash clothes. She did that whole wash herself.

A Polish woman had a child with impetigo of the face and upper part of the trunk. The visiting nurse went to the house to see the mother. She found her willing but ignorant. So the nurse taught her how to bathe her child and keep him clean. She even showed the woman what it meant to have a clean house. This of course was not all done in one visit. Imagine's the nurse's feelings when, on one of her visits, the first woman led her to a neighbor's rooms and showed her how clean they were, and with much pride said to the nurse, "I taught her how." It is in such ways as these that the visiting nurse can be invaluable to the clinic. It is not uncommon nowadays for the patients to ask for the visiting nurse the moment they arrive at the clinic.

A wise plan is to have the visiting nurse present at the clinic where the physician can introduce her directly to the patient. Then she goes to the home as the physician's agent, and is known as such. We have found that this makes for good will. When the nurse calls, she is welcomed. Everything is opened to her, and, as an accredited agent of the clinic, her word carries more weight than if she had come without her previous introduction.

THE HOSPITAL NURSE

We must not forget to consider the place of the hospital nurse in our ideal clinic. She is important to us for several reasons. First, she is needed to do the ordinary work of a nurse. Second, she can be of great use in supplementing within the consulting room the work of the clinic secretary. Third, it is important that we, as dermatologists, should train nurses in our special branch of nursing.

As in all clinics, there is much work for the nurse to do in the clinic; dressings have to be made, patients have to be prepared for examination, and endless little things have to be done here and there. It is best that there should be a permanent head nurse who can become an integral part of the personnel. Under her, she should have an appropriate number of pupil nurses assigned to the department for a period of training, to be succeeded by others.

We have all undoubtedly suffered at times in our private practice from incompetent nurses, if we have been able to get any nurses. Therefore, it is important that we should train nurses in the care of dermatologic cases. It is only by such training that we can assure ourselves of competent nursing in the future. Some day, if we continue to teach the pupil nurses in our clinic, we shall be able to call on nurses familiar with diseases of the skin and with the methods used in caring for them.

THE CLINIC SECRETARY AND OTHER ASSISTANTS

I am convinced that another most valuable adjunct to the personnel of the staff is a clinic secretary. Everything depends on her personality and adaptability. She can make everything or nothing of her job, as she pleases. She can, if she likes, be a mere machine, or she can be a helpful human being. Her work lies in the hospital, but outside the doors of the clinic. From the time the patient enters the waiting room until he enters the consulting room, he is under the care and charge of the clinic secretary. She welcomes the patient as he enters, and seeks to learn the facts about him. As time goes on the clinic secretary and the patient become good friends, if the secretary is of the right sort. This means much to the patient and to the clinic, for the patients learn to confide in the secretary and to tell her their troubles. By these means,

we may learn much that is significant which otherwise we should never know. Between times the secretary is seeing to it that the patient's records are at hand in order that she may call the patients when their turns arrive and send them to the physician with their record cards. At our skin clinic, we are quite proud of the volunteer clinic secretaries. One of them has been with us for seven years, one for four and one for three. They evidently get something out of the job.

Another position which we have found volunteers can fill acceptably is that of operator of the quartz lamp. We have a volunteer now who can be trusted to do good work. It is well, however, to send the patients for whom lamp treatments are desired into the operator with a written prescription telling the part to be exposed, the time and the distance.

If I had the money, I would have a number of stenographers included in the staff. Good notes we all know are desirable. It is astonishing how much they improve with a stenographer at hand to take dictation.

COMMENT

These are some of the things I would have and some of the things I would do in an ideal clinic. Tomorrow I shall wish to add or to modify, if I have progressed with the dermatologic world. Every day there is some new development or discovery. With judgment and acumen, we should adopt some of these; some we should reject.

Your point of view is very probably quite different and this ideal may fail to satisfy you but it may serve as an inspiration or at least for a point of departure.

THE CALCIUM CONTENT OF THE BLOOD IN VARIOUS DISEASES OF THE SKIN

BASED ON AN ANALYSIS OF OVER THREE HUNDRED CASES *

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A search through the extensive medical literature for studies on the calcium content of the blood as related to skin diseases reveals the fact that little work has been reported on the subject. Schamberg and Brown [1] recently published their findings on the examination of the blood from a number of patients suffering from psoriasis, eczema, urticaria and other cutaneous diseases. The experiments of these two men included tests for calcium, magnesium, phosphorus and potassium. Their results showed figures which fell within the normal limits.

Levin and Kahn [2] reported a few calcium determinations in various dermatoses, all falling within normal limits.

Thro and Ehn,[3] using the gravimetric method, found an increased calcium content of the blood in patients suffering from acne and a decreased blood calcium in those who had furunculosis. Later, Thro and Ehn,[4] using the titration method of Halversan and Bergeim, found a low figure for the calcium of the blood in four cases of furunculosis. In this paper, they state that the results obtained with the gravimetric method were probably unreliable, because some of the filter paper they had been using contained considerable amounts of calcium. With further study, however, Thro and Ehn,[5] using the titration method of Kramer and Tisdale, found the calcium content of the blood low in several cases of furunculosis.

Pulay [6] (quoted by Schamberg and Brown) in a small series of cases found some variation in the calcium content of the blood in

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1. Schamberg, J. F., and Brown, H.: A Study of Some of the Inorganic Salts in the Blood in Psoriasis and in Certain Other Dermatoses, Arch. Dermat. & Syph. **9**:368 (March) 1923.
2. Levin, O. L., and Kahn, M. D.: Am. J. M. Sc. **162**:698, 1921.
3. Thro, W. C., and Ehn, M.: Proc. Soc. Exper. Biol. & Med. **17**:115, 1920.
4. Thro, W. C., and Ehn, M.: Proc. Soc. Exper. Biol. & Med. **18**:189, 1921.
5. Thro, W. C., and Ehn, M.: Proc. Soc. Exper. Biol. & Med. **20**:313, 1923.
6. Pulay, E.: Dermat. Wchnschr. **76**:81, 1923.

different dermatoses and suggested that the colloidal aspect of the question may be of importance, and that much may depend on the calcium content of the tissues of the body.

Briggs [7] (quoted by Schamberg and Brown) found normal values for phosphorus, chlorin, sodium, potassium, calcium and magnesium in the blood plasma of three patients with acne, and one each with psoriasis and urticaria.

The normal values for the calcium content of the human blood serum as given by various investigators differ slightly, but may be said to range from 9 to 12 mg. per 100 cubic centimeters of serum.

In our study, we employed the method of Kramer and Tisdall.[8]

TABLE 1.—*Calcium Content of Blood in Disease*

Name	Sex	Diagnosis	Calcium Content	Remarks
H. G.	F	Erythema multiforme	7.9	
R. K.	F	Erythema multiforme	8.0	
M. A.	..	Urticaria	11.47	
A. G.	..	Urticaria	9.91	
G. N.	M	Urticaria	10.85	
M. M.	..	Urticaria	11.5	
E. G.	..	Urticaria	8.0	
L. T.	F	Urticaria	10.72	
D. W.	..	Urticaria	9.9	
W. B.	..	Urticaria	10.96	
H. H.	..	Urticaria	10.1	
S. S.	M	Urticaria	9.73	
A. D.	..	Urticaria	9.4	
A. R.	F	Urticaria	9.3	
N. P.	M	Urticaria	11.8	
M. B.	..	Angioneurotic edema	9.1	Six months complicated by purpura
R. V.	..	Angioneurotic edema	9.0	
A. S.	..	Angioneurotic edema	11.3	
C. Z.	F	Purpura	9.52	
P. W.	M	Purpura	7.4	
K. W.	..	Purpura	7.8	
M. S.	F	Eczema (acute)	9.73	
J. S.	M	Eczema (acute)	12.0	
R. S.	F	Eczema (acute)	9.36	
J. G.	M	Eczema (acute)	11.3	
B. M.	F	Eczema (acute)	10.6	Complicated by epithelioma
M. W.	M	Eczema (acute)	7.0	
C. H.	M	Eczema (acute)	8.25	
M. L.	F	Eczema (acute)	10.38	
Mrs. W.	F	Eczema (acute)	11.0	
J. B.	M	Eczema (acute)	10.5	
S. W.	M	Eczema (subacute)	7.8	
B. W.	M	Eczema (subacute)	9.3	
A. S.	M	Eczema (subactue)	11.3	
R. F.	F	Eczema (subacute)	10.0	
M. B.	M	Eczema (subacute)	11.2	Complicated by folliculitis
A. E.	M	Eczema (subacute)	10.3	
A. S.	M	Eczema (subactue)	11.5	
D. W.	M	Eczema (subacute)	9.5	
A. M.	F	Eczema (subacute)	7.0	
W. W.	M	Eczema (subacute)	8.5	
A. M.	F	Eczema (subacute)	9.5	Parathyroid
F. F.	..	Eczema (subacute)	9.8	
A. M.	F	Eczema (subacute)	9.0	
A. M.	F	Eczema (subacute)	8.7	
E. C.	M	Eczema (subacute)	11.0	
A. C.	F	Eczema (subacute)	6.64	12/14/23
A. C.	F	Eczema (subacute)	8.15	2/25/24 after parathyroid and ol. morrhuae
E. M.	F	Eczema (subacute)	11.9	
M. M.	F	Eczema (subacute)	11.4	

7. Briggs, A. P.: J. Biol. Chem. **57**:351, 1923.
8. Kramer, B., and Tisdall, F. F.: J. Biol. Chem. **53**:241, 1922.

TABLE 1.—*Calcium Content of Blood in Disease—(Continued)*

Name	Sex	Diagnosis	Calcium Content	Remarks
K. J.	F	Eczema (subacute)	10.4	
J. V.	M	Eczema (subacute)	9.8	
R. S.	M	Eczema (subacute)	10.6	
A. W.	F	Eczema (subacute)	10.6	
C.	F	Eczema(subacute)	10.2	
A. S.	F	Eczema (subacute)	10.0	
F. W.	F	Eczema (subacute)	8.9	
E. C.	F	Eczema (chronic)	10.0	
B.	..	Eczema (chronic)	9.8	
M. S.	F	Eczema (chronic)	11.7	
E. L.	F	Eczema (chronic)	9.3	
J. S.	M	Eczema (chronic)	9.4	
M. G.	..	Eczema (chronic)	10.0	
L. S.	M	Eczema (chronic)	10.7	
E. S.	M	Eczema (chronic)	10.8	
A. P.	F	Eczema (chronic)	8.0	
H. H.	M	Eczema (chronic)	8.6	
A. B.	M	Eczema (chronic)	11.9	
A. P.	F	Eczema (chronic)	10.5	
E. B.	F	Eczema (chronic)	8.5	
H. F.	F	Eczema (chronic)	9.9	
A. B.	F	Eczema (chronic)	10.8	
M. L.	F	Eczema (chronic)	10.8	
S. B.	F	Eczema (chronic)	10.5	
D.	..	Eczema (chronic)	9.4	Scrotum
M. S.	..	Eczema (chronic)	10.5	
M. B.	F	Eczema (chronic)	9.44	Impetiginous
J. K.	M	Occupational dermatitis	10.5	
H. A.	M	Occupational dermatitis	7.5	
K. J.	M	Occupational dermatitis	9.5	
E. K.	F	Occupational dermatitis	11.7	
A. T.	F	Occupational dermatitis	10.5	
P. S.	M	Occupational dermatitis	9.5	
M. G.	M	Occupational dermatitis	10.0	
W. S.	M	Occupational dermatitis	11.0	
H. A.	..	Occupational dermatitis	10.0	
W. S.	M	Dermatitis venenata	10.0	
X. Y.	..	Acute dermatitis	10.0	
D. A.	M	Acute dermatitis	9.0	
Mrs. A.	..	Actinic dermatitis	7.0	
M. M.	F	Actinic dermatitis	6.9	
B. B.	F	Actinic dermatitis	8.0	
A. B.	F	Radiodermatitis	10.66	
R. M.	F	Herpes simplex	7.5	
B. B.	F	Zoster	9.6	
Mrs. W.	F	Dermatitis herpetiformis	10.6	
A. B.	M	Dermatitis herpetiformis	11.4	
G. C.	M	Pompholyx	9.5	
M. T.	..	Epidermolysis bullosa hereditaria	8.9	
L. B.	F	Neurodermite	10.8	
M. S.	F	Neurodermite	11.5	
A. H.	M	Neurodermite	9.5	
F. O.	M	Neurodermite	9.5	
J. S.	F	Neurodermite	11.2	
O. P.	F	Neurodermite	11.0	
M. P.	F	Seborrheic eczema	9.86	
I. L.	..	Seborrheic eczama	11.0	
E. P.	F	Seborrheic eczema	9.35	
A. S.	F	Seborrheic eczema	10.0	Oily
F. M.	F	Seborrheic eczema	11.8	
J. L.	F	Seborrheic eczema	9.2	
A. G.	M	Seborrheic eczema	11.4	
M. A.	M	Seborrheic eczema	10.4	
S. J.	F	Seborrheic eczema	9.5	
W. S.	M	Seborrheic eczema	10.0	Complicated by dermatitis venenata
D. R.	M	Seborrheic eczema	10.24	
P. H.	M	Seborrheic eczema	12.0	
M. G.	M	Seborrheic eczema	11.8	
F. O.	F	Seborrheic eczema	11.5	
A. S.	M	Seborrheic eczema	11.8	
B. C.	M	Seborrheic eczema	8.0	
W. S.	M	Seborrheis eczema	12.0	
L. M.	M	Seborrheic eczema	11.1	
A. O.	M	Seborrheic eczema	11.3	Complicated by acne and rosacea
M. A.	F	Seborrheic eczema	11.5	
B.	..	Seborrheic eczema	9.7	
O.	..	Seborrheic eczema	11.0	
E. S.	M	Seborrheic eczema	10.8	Complicated by chronic eczema

TABLE 1.—*Calcium Content of Blood in Disease—(Continued)*

Name	Sex	Diagnosis	Calcium Content	Remarks
M. S.	M	Seborrheic eczema	10.25	
R. R.	M	Seborrheic eczema	11.2	
J. K.	M	Seborrheic eczema	9.95	
J. L.	?	Seborrheic eczema	9.8	
A. D.	M	Seborrheic eczema	9.9	
J. G.	M	Seborrheic eczema	11.9	
E. W.	F	Seborrheic eczema	10.44	
A. F.	F	Seborrheic eczema	8.25	
L. S.	F	Seborrheic eczema	10.11	
S. M.	M	Seborrheic eczema	9.8	
H. F.	F	Pityriasis rosea	9.15	
B. A.	M	Psoriasis	10.9	Complicated by xeroderma
R. F.	M	Psoriasis	8.8	
G. L.	F	Psoriasis	9.0	
A. D.	F	Psoriasis	11.1	
S. B.	F	Psoriasis	9.8	
K. F.	M	Psoriasis	11.6	
N. B.	M	Psoriasis	10.2	
D. C.	F	Psoriasis	9.5	
M. S.	F	Psoriasis	11.8	
L. G.	F	Psoriasis	8.5	Chronic, universal, with tumor formations
F. N.	M	Psoriasis	9.48	
L. C.	F	Psoriasis	11.8	
A. J.	M	Psoriasis	10.45	
L. M.	F	Psoriasis	11.7	
J. S.	M	Psoriasis	9.78	
J. M.	M	Psoriasis	10.5	
S. H.	F	Psoriasis	9.24	
J. G.	M	Psoriasis	11.1	
S.	..	Psoriasis	11.2	
S.	..	Psoriasis	10.8	
K.	..	Psoriasis	10.2	
L.	F	Psoriasis	9.0	
M. G.	F	Psoriasis	8.68	Chronic
J. S.	M	Psoriasis	8.00	Chronic
B. J.	F	Psoriasis	9.45	Chronic
K. J.	F	Psoriasis	8.8	Chronic
F. C.	F	Psoriasis	8.74	Chronic
H. S.	M	Psoriasis	12.0	Chronic
L. Z.	F	Psoriasis	11.1	Chronic
M. R.	M	Psoriasis	11.0	Generalized
E. H.	F	Psoriasis	10.1	Generalized
W. B.	M	Psoriasis	13.0	Acute
M. B.	F	Psoriasis	10.0	Acute
G. G.	M	Psoriasis	10.2	Generalized
J. C.	F	Acne papulosa	9.5	
G.	..	Acne papulosa	6.9	
L. F.	M	Acne papulosa	11.7	
S.	..	Acne papulosa	9.5	
A. M.	F	Acne papulosa	10.0	
S. C.	M	Acne papulosa	8.30	
M. M.	M	Acne papulosa	8.3	
S. P.	M	Acne papulosa	8.81	
M. G.	F	Acne papulosa	11.3	
B. H.	F	Acne papulosa	10.4	
A. D.	F	Acne papulosa	4.9	
W. A.	M	Acne papulosa	8.8	
C. D.	F	Acne papulosa	11.0	
T. B.	M	Acne papulosa	9.52	
G. I.	M	Acne papulosa	12.0	
K.	..	Acne papulosa	11.0	
E. D.	..	Acne papulosa	9.9	
F. B.	M	Acne pustulosa	10.44	
B. B.	M	Acne pustulosa	10.2	
S. G.	M	Acne pustulosa	10.47	
F. N.	F	Acne pustulosa	11.24	
G. M.	F	Acne pustulosa	10.6	
E. G.	F	Acne pustulosa	10.0	
L. C.	M	Acne pustulosa	9.0	
M. K.	F	Acne pustulosa	11.5	
M. C.	F	Acne pustulosa	10.6	
V. F.	F	Acne pustulosa	7.1	
F. E.	F	Acne pustulosa	9.7	
C. N.	F	Acne indurata	11.8	
M. S.	M	Acne indurata	9.8	
J. B.	M	Acne indurata	11.2	
M. K.	M	Acne indurata	6.8	
M. M.	F	Acne indurata	9.0	
B. H.	M	Acne indurata	10.6	
C. M.	M	Acne indurata	8.0	
M. C.	F	Acne indurata	9.8	

TABLE 1.—*Calcium Content of Blood in Disease—(Continued)*

Name	Sex	Diagnosis	Calcium Content	Remarks
E. L.	M	Acne indurata	12.0	
F. L.	M	Acne indurata	9.8	
P. C.	M	Acne indurata	13.2	
E. F.	M	Acne indurata	6.0	
F. B.	M	Rosacea	11.8	
J. C.	M	Rosacea	11.0	
E. A.	M	Rosacea	11.5	
A. L.	F	Rosacea	9.3	
J. K.	F	Rosacea	11.1	
A. O.	M	Rosacea	11.3	
O. B.	F	Rosacea	11.7	
Mrs. L.	F	Rosacea	9.2	
H. R.	M	Impetigo (recurring)	11.5	
S. R.	M	Folliculitis	9.52	
A. R.	M	Folliculitis	9.4	
M. B.	M	Folliculitis	11.2	
C.	..	Folliculitis	10.8	
P. S.	M	Folliculitis barbae (sycosis vulgaris)	8.04	
M. P.	M	Folliculitis barbae (sycosis vulgaris)	8.6	
I. S.	M	Folliculitis barbae (sycosis vulgaris)	10.1	
R. R.	M	Folliculitis barbae (sycosis vulgaris)	9.2	
A. R.	M	Folliculitis barbae (sycosis vulgaris)	12.2	
L. C.	M	Folliculitis barbae (sycosis vulgaris)	11.2	
S. P.	M	Folliculitis barbae (sycosis vulgaris)	8.0	
H. G.	M	Folliculitis barbae (sycosis vulgaris)	10.1	
D.	..	Folliculitis barbae (sycosis vulgaris)	9.5	
M. M.	F	Folliculitis decalvans	8.7	
G. W.	M	Furunculosis	11.3	
B. B.	M	Furunculosis	10.2	
P. B.	M	Furunculosis	9.11	
A. C.	M	Furunculosis	8.7	
S. H.	F	Furunculosis	10.18	
C. G.	F	Furunculosis	10.6	
R. M.	M	Furunculosis	8.98	
H. K.	M	Furunculosis	10.8	
F. W.	M	Furunculosis	10.0	
R. R.	M	Furunculosis	9.3	
M. M.	F	Furunculosis	8.7	
E. S.	M	Furunculosis	6.9	
P. B.	M	Furunculosis	9.7	
Dr. J.	M	Furunculosis	5.9	
B. T.	M	Furunculosis	11.5	
G. M.	M	Furunculosis	9.1	
L. L.	F	Furunculosis	7.15	
G. I.	M	Furunculosis	12.0	
K. W.	M	Furunculosis	11.4	
H. B.	M	Furunculosis	8.0	
M. M.	M	Furunculosis	11.4	
C.	..	Furunculosis	9.3	
W. D.	M	Furunculosis	9.4	
T.	..	Furunculosis	11.2	
E. B.	..	Furunculosis	7.1	
J. H.	..	Furunculosis	7.9	
H.	..	Furunculosis	9.5	
M.	..	Paronychia	11.3	
Kass	..	Erysipelas	10.1	
Shapiro	..	Erysipelas	9.7	
Lawson	..	Erysipelas	10.0	
R. W.	F	Suppurative cellulitis	7.7	
M. D.	M	Carbuncle	9.8	
M. C.	F	Lichen planus	10.0	
A. H.	M	Dermatophytosis	11.9	
E. Z.	F	Dermatophytosis	9.5	
P. H.	F	Dermatophytosis	11.5	
A. K.	M	Dermatophytosis	11.0	
F. S.	M	Dermatophytosis	9.7	
P. D.	M	Dermatophytosis	10.5	
F. F.	M	Dermatophytosis	10.3	
B.	..	Dermatophytosis	10.8	
J. W.	M	Dermatophytosis	10.1	
P. C.	F	Scabies	9.52	
K. G.	M	Scabies	10.60	
J. F.	M	Lupus vulgaris	10.72	
H. F.	F	Lupus erythematosus	9.5	
H. L.	F	Lupus erythematosus	11.5	
T. K.	M	Lupus erythematosus	11.0	
A. A.	F	Lupus erythematosus	11.6	
I. B.	F	Papulonecrotic tuberculid	10.1	
G. G.	M	Syphilis	10.45	
S. S.	M	Syphilis	10.3	
C. C.	M	Syphilis	8.9	
A. W.	M	Syphilis	10.9	

TABLE 1.—*Calcium Content of Blood in Disease—(Continued)*

Name	Sex	Diagnosis	Calcium Content	Remarks
C.	..	Syphilis	11.2	
B. M.	F	Epithelioma	10.6	
M. R.	M	Raynaud's disease	10.5	
M. M.	M	Raynaud's disease	10.5	
M. D.	F	Vitiligo	11.7	
J. P.	M	Alopecia areata	7.0	
G. C.	F	Alopecia areata	9.8	
H. B.	M	Alopecia areata	11.6	
A. K.	F	Idiopathic pruritus	10.9	
M. M.	F	Idiopathic pruritus	9.01	
E. S.	F	Idiopathic pruritus	10.7	
A. M.	F	Idiopathic pruritus	11.2	
A. W.	..	Idiopathic pruritus	9.9	
F. H.	M	Senile pruritus	11.3	
B. G.	F	Pruritus vulvae	11.3	
V.	..	Pruritus hiemalis	9.1	
E. K.	M	Pruritus hiemalis	9.7	
Marie Walker	..	Keloid	10.8	
J. L.	M	Steatomas	10.6	

If we accept 9 to 12 mg. per one hundred cubic centimeters of blood as the normal values for the calcium content of human blood serum, a study of the main features of Table 1 is revealed in Table 2.

TABLE 2.—*Summary of Table 1*

Disease	Total Number of Cases	9 Mg. of Calcium per 100 C.c., Number of Cases	Normal Blood Calcium, Number of Cases	Blood Calcium Above 12 Mg. per 100 C.c., Number of Cases
Erythema multiforme	2	2	0	0
Urticaria	13	1	12	0
Angioneurotic edema	3	0	3	0
Purpura	3	2	1	0
Eczema, acute	10	2	8	0
Eczema, subacute	27	7	20	0
Eczema, chronic	20	3	17	0
Dermatitis, occupational	9	1	8	0
Dermatitis, actinic	3	3	0	0
Dermatitis, venenata	1	0	1	0
Radiodermatitis	1	0	1	0
Dermatitis herpetiformis	6	0	6	0
Herpes simplex	1	1	0	0
Herpes zoster	1	0	1	0
Pompholyx	1	0	1	0
Epidermolysis bullosa hereditaria	1	1	0	0
Neurodermite	6	0	6	0
Seborrheic eczema	33	2	31	0
Pityriasis rosea	1	0	1	0
Psoriasis	34	6	26	2
Acne papulosa	17	6	11	0
Acne pustulosa	11	1	10	0
Acne indurata	9	3	5	1
Rosacea	8	0	8	0
Impetigo	1	0	1	0
Folliculitis	4	0	4	0
Folliculitis barbae	9	3	5	1
Folliculitis decalvans	1	1	0	0
Furunculosis	27	9	18	0
Paronychia	1	0	1	0
Erysipelas	3	0	3	0
Suppurative cellulitis	1	1	0	0
Carbuncle	1	0	1	0
Lichen planus	1	0	1	0
Dermatophytosis	9	0	9	0
Scabies	2	0	2	0
Lupus vulgaris	1	0	1	0
Lupus erythematosus	4	0	4	0
Papulonecrotic tuberculid	1	0	1	0
Syphiloderms	5	1	4	0
Epithelioma	1	0	1	0
Raynaud's disease	2	0	2	0
Vitiligo	1	0	1	0
Alopecia areata	3	1	2	0
Pruritis (various types)	9	0	9	0
Keloid	1	0	1	0
Steatomas (generalized)	1	0	1	0

DISCUSSION

We do not feel that any significance attaches to a decrease in the blood calcium unless the decrease is marked. More intensive study of Table 1 reveals the fact that a definite decrease in blood calcium was found in only one case of psoriasis.

In the conditions of acne, eczema, furunculosis and folliculitis barbae, a noticeable decrease in blood calcium was found in several patients. In some cases of eczema and furunculosis associated with a low blood calcium, decided improvement resulted from the internal administration of parathyroid and calcium lactate, and the improvement was associated with an increase in the amount of blood calcium.

Of thirteen cases of urticaria examined, only one gave a low blood calcium. Three cases of angioneurotic edema gave normal figures. On the other hand, two cases of purpura and two of erythema multiforme gave distinctly low figures. Some years ago, Wright suggested the use of calcium in the treatment of these conditions, and diverse opinions have since been expressed as to its efficacy. White reports favorable results in persistent, recurrent cases of erythema multiforme from the use of calcium lactate. Our studies, together with those of Schamberg and Brown referred to in the foregoing, would seem to indicate that there is no deficiency of calcium in the blood of patients with urticaria. The number of cases of angioneurotic edema, purpura and erythema multiforme examined are too few to warrant any conclusions.

In three cases of what we have called dermatitis actinica for want of a better term (cases showing a marked hypersusceptibility to sunlight), the blood calcium was distinctly low. These cases will form the subject of another report.

In conclusion, it may be said that examinations of the blood from patients suffering from various dermatoses do not reveal any positive relationship between the calcium content of the blood and the skin disease. The presence of a calcium deficiency was revealed in several cases of acne vulgaris, eczema, furunculosis and folliculitis. The administration of calcium and parathyroid by mouth seemed to produce clinical improvement in some of the patients and enhance the calcium content of the blood. Although normal figures were obtained in urticaria and allied conditions, it is possible that in such instances the tissues may have been unable to take up and use the blood calcium or that there may have been a disturbed colloidal chemistry of the cells. The clinician who is anxious to establish a relationship between abnormal calcium metabolism and skin diseases must wait for more improved laboratory methods and a better understanding of the whole subject of calcium metabolism.

EFFECTS OF NONSPECIFIC PROTEIN THERAPY IN SYPHILIS

WITH SPECIAL REFERENCE TO ITS CUTANEOUS MANIFESTATIONS *

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AND

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PHILADELPHIA

Nonspecific therapy has been successfully applied in many fields of medicine, and the list of diseases which are favorably influenced by this type of treatment constantly increases. It has proved of value in the treatment of acute infections, such as typhoid fever, anthrax, diphtheria, erysipelas, pneumonia, scarlet fever, smallpox, typhus fever and septicemia; in arthritis; in gonorrhea and its complications; in various dermatologic conditions including psoriasis, exfoliative dermatitis, furunculosis, eczema, etc.; in diseases of the eye, such as uveitis, panophthalmitis, iritis, pneumococcic corneal ulcers and keratitis; and in such miscellaneous conditions as angioneurotic edema, secondary anemia and disorders of the blood, such as purpura. In recent years attention has been called to the beneficial effects following protein therapy in general paralysis and tabes, and Kryle [1] in 1917, reported favorably on the effect of combined protein and the usual antisyphilitic medication in reducing persistently positive Wassermann reactions to negatives.

Despite unfavorable unpublished data of one of us (S. S. G.) on the effects of intramuscular nonspecific protein injections in reducing so-called Wassermann-fast cases to negative, when our attention was called to Kryle's article, it was decided to repeat this work using combined nonspecific and antisyphilitic therapy. In this paper, we will simply deal with the effects of protein stimulation on some phases of syphilis, reserving for a later communication our notes on its value in acute and chronic syphilis.

The procedure as carried out consisted of a preliminary course of six intramuscular (gluteal) injections of a 4 per cent. sterile suspension of milk protein,[2] the injections being given at intervals of two to three days. On the completion of the course of milk protein injections, the

* From the Department of Dermatology and Syphilology, University of Pennsylvania Graduate School of Medicine, clinic of Dr. Jay Frank Schamberg.

1. Kryle: Wien. klin. Wchnschr. **30**:712, 1917.

2. Prepared by Dr. McNeary, pharmacist to the hospitals of the University of Pennsylvania Graduate School of Medicine.

Fig. 1 (Case 1).—Pigmented remains of an ulcerating tertiary syphilid of right elbow after six injections, each 5 c.c. of a 4 per cent. suspension of milk protein. Complete symptomatic cure.

A B

Fig. 2 (Case 2).—*A*, annulopapular secondary syphilids of cheeks before commencement of protein stimulation. *B*, condition after six injections, of milk protein. Infiltration completely resolved on right cheek and almost completely on left cheek. Pigmented spots remaining.

patients received a series of injections of neo-arsphenamin at weekly intervals, blood being withdrawn each time for the Wassermann test.

The surprising symptomatic cure of multiple ulcerating tertiary lesions in the first patient treated suggested a thorough examination of both the effects and the value of nonspecific protein stimulation alone and in conjunction with the usual antisyphilitic drugs. Definite data

Fig. 3 (Case 4).—Tertiary annulopapular eruption of wrist and palm with moderately marked hyperkeratosis of the palm of ten years' duration before institution of protein stimulation.

are furthermore desirable, since our attention has been recently called to the fact that certain commercial firms are making exaggerated claims for protein products in the treatment of syphilis. No primary cases were selected, because it was felt that the time lost by giving a preliminary course of milk protein injections, which consumed a period of two weeks, would jeopardize the chance of an abortive cure. In the

series of patients that were treated (thirty-five in all), certain varieties of the cutaneous lesions in the acute secondary cases were noted to involute rapidly following injections of the milk protein suspension, whereas in other types the eruption became extremely profuse following the stimulation; tertiary gummatous lesions involuted, and tertiary ulcerative lesions healed rapidly.

Fig. 4 (Case 4).—Complete symptomatic cure with the exception of erythematous appearance where lesions had been, after six injections (5 c.c. each) of a 4 per cent. suspension of milk protein.

REPORT OF CASES

CASE 1.—A woman, aged 27, colored, entered the hospital for treatment of tertiary ulcerative lesions on right elbow, two ulcerating gummas on the right hand (dorsum) and an ulcerating gummatous infiltration of the right foot (dorsum). Her Wassermann reaction (Kolmer modification) was strongly posi-

tive, and she was treated for trial by the method referred to in the foregoing. Two days after the first injection of milk protein suspension, the ulcers and nodules were surrounded by a distinct focal (Jarisch-Herxheimer) reaction with swelling, exudation and redness. After the third injection, there was definite evidence of healing. The bases were clean, and the ulcers were healing from the floor up. All evidences of local inflammation had disappeared. By the sixth injection, and before the institution of neo-arsphenamin therapy, healing was complete (Fig. 1).

Case 2.—A woman, aged 24, presented late annulopapular syphilids of the face, with a generalized maculopapular eruption on the body and palmar lesions.

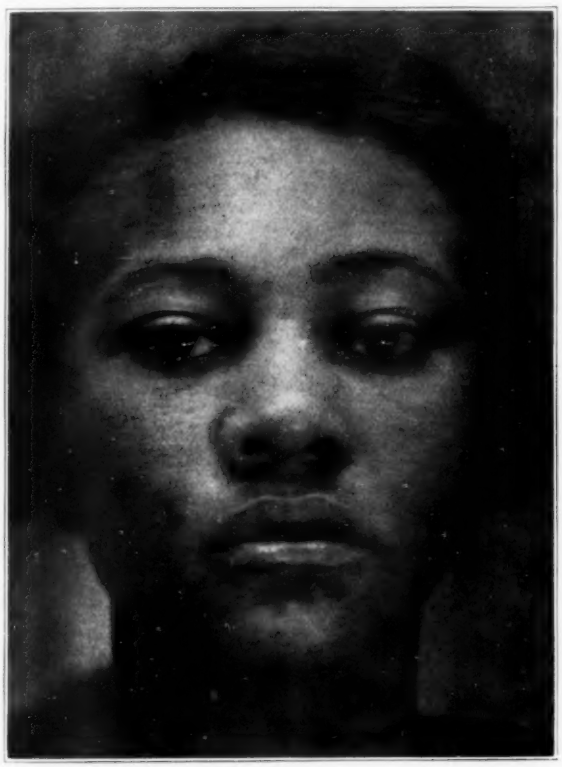

Fig. 5 (Case 5).—Pigmented remains of vegetating secondary syphilids of chin and nasolabial furrows after six injections of a 4 per cent. suspension of milk protein (5 to 6 c.c. every other day).

Following two injections of 5 c.c. of a 4 per cent. suspension of milk protein, intramuscularly, there was a beginning involution of all lesions. After six injections, and before the institution of arsenical therapy, the eruption was in general 75 per cent improved, and the infiltration in most of the lesions practically gone. The patient said that she felt much better generally (Figs. 2, 3 and 4).

Case 3.—A man, aged 27, with secondary syphilis, with a generalized polymorphous eruption with papular lesions predominating, was very weak and

run-down. After the second injection there was evidence of a definite Jarisch-Herxheimer reaction. The lesions became more profuse, but constitutionally the patient was greatly improved.

The eruption became more and more profuse with each injection of milk protein, despite the fact that there was a general physical feeling of well being.

Case 4.—A woman, aged 45, had a tertiary nodular syphilid of the right hand of ten years' duration. There was a deeply infiltrated patch involving the entire palm and extending in places to the back of the hand and to the wrist. The border was nodular in places and annular in outline. The surface of the palm was covered with a heavy white scale and was moderately hyperkeratotic. The Wassermann reaction was strongly positive. One week following the sixth injection of milk protein, and before any neo-arsphenamin had been administered, the infiltration, nodules and hyperkeratosis were entirely gone, leaving only an erythematous condition at the site of the former eruption. This, as in Case 1, was a striking result, and paralleled in rapidity the action of specific agents in tertiary manifestations of this type. (Fig. 5).

Case 5.—A woman, aged 19, with late secondary syphilis, had had a maculopapular eruption with vegetating papular lesions on the chin and nasolabial furrows and an annulopapular eruption on the palms for one month. After three injections of protein milk, there was a 75 per cent. disappearance of all cutaneous manifestations. The eruption on the face had entirely involuted by the sixth injection of the milk protein suspension; only pigmented vestiges of the cutaneous manifestations remained. Fig. 5.

Case 6.—A woman, aged 34, had sixth nerve palsy, with double vision. After the sixth injection of the protein suspension and before the institution of arsenical therapy, there was complete recovery of the palsy with return of the sight to normal.

Cases 8 to 35.—In all, twenty-nine patients with latent syphilis with persistently positive new Kolmer complement-fixation tests were treated in accordance with the method outlined. In twenty-six of these cases the reactions remained strongly positive, some of the patients receiving as many as fifteen injections of neo-arsphenamin in addition to the milk protein suspension. In three cases, there was a prompt reversal of this reaction from strongly positive to negative after six injections of milk protein suspension and four injections of neo-arsphenamin.

COMMENT

While this series of cases is not large, it suffices to show that nonspecific protein therapy favorably influences the course of syphilis. In what manner it exerts this favorable influence or what value it has in the treatment of syphilis, we are, at present, not prepared to say.

We desire to emphasize that it is not our purpose to intimate that injections of foreign protein are in any way a cure for syphilis. Our experience, however, would indicate that there is a definite influence on the course of the disease following their use and this influence, in chronic syphilis at least, appears to be a favorable one. If the effect of the injections is to stimulate the natural protective forces of the body, the use of nonspecific protein therapy as an adjunct to specific therapy may be of decided value.

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MYELOID LEUKEMIA OF THE SKIN

REPORT OF A CASE

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While toxic skin manifestions (the so-called leukemids) are not uncommon in leukemias, true myelogenous leukemia of the skin is an extremely rare disease. Ketron and Gay,[1] in a recent paper, have reviewed six cases and added one of their own with manifestations of myeloid leukemia of the skin. Zurhelle,[2] in Germany, reported another case of "myeloid, subleukemic chlorleukemia" of the skin. This, to our knowledge, represents the total number of cases which have been recorded up to date. The paucity of references has prompted the publication of the following report.

History.—S. P., a man, aged 60, was first seen in consultation, Nov. 15, 1922. He gave the following history: He was born in Russia. The family history was negative. He had never been seriously ill and denied venereal infection. He was a moderate smoker and did not indulge in narcotics. He was the father of eight healthy children.

The present illness began a year before with sticking pain in the lower sternum and shortness of breath on exertion. Six weeks preceding the present consultation, the patient had noticed the appearance of bluish "spots" on his body. They caused no pain and no discomfort, and he was not alarmed by their appearance. In the course of a few weeks, the skin lesions grew in number and covered a large part of his body. Simultaneously the symptoms of dyspnea underwent exacerbation, and he began to suffer from sleeplessness. He had pain in the left hypochondrium, which was most annoying at night. He could not lie on his left side. The patient complained also of occasional pain in his throat and of frequent "colds." His appetite was fairly good, and he had lost no weight in the last year. He was treated symptomatically by various physicians without improvement. Unable to arrive at a definite diagnosis and aware of the complexity of his condition, I advised the patient to enter the Mount Sinai Hospital for further observation. He did so after three weeks' hesitation.

Physical Examination.—The patient had the appearance of a well nourished and well developed man of about 60; mentally, he was alert and agile. The skull bore a shallow depression in the right frontal region covered with scar tissue, with no points of tenderness. The scar was due to an accident in childhood. His nasal septum was deviated to the left. Most of the teeth were missing. The left tonsil was broken down and ulcerated. Both conjunctivae were covered with smaller and larger hemorrhagic effusions. The fundi showed signs of arteriosclerotic changes. His lungs were emphysematous. The heart

1. Ketron, Lloyd W., and Gay, Leslie N.: Myeloid Leukemia of the Skin, Arch. Dermat. & Syph. **7**:176 (Feb.) 1923.

2. Zurhelle, Emil: Ueber Hauterscheinungen bei Erkrankungen des myeloischen Systems, Dermat. Ztschr. **37**: No. 1-2, 1922.

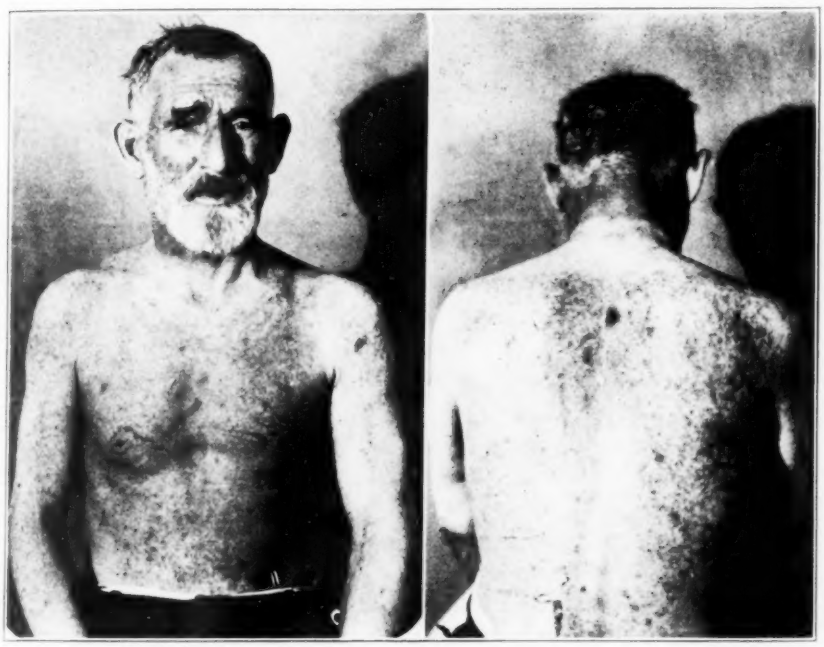
showed no pathologic findings. The abdomen was distended. The liver was palpable about 3 cm. below the right costal margin; its edges were hard and smooth. No tenderness was exhibited on pressure. In the left upper quadrant of the abdomen the spleen presented a hard, smooth and tender mass, which moved on respiration and reached half way to the umbilicus. The reflexes were normal. The urine was negative for albumin and sugar. An estimation of uric acid was not made. Bence-Jones protein was absent. Blood examination performed on Dec. 3, 1922, gave the following differential count: red blood cells, 4,824,000 and white blood cells, 13,600. There were 49.5 per cent. polymorphonuclear cells; 28.5 per cent. lymphocytes; 14 per cent monocytes; 4 per cent. myelocytes and 4 per cent. myeloblasts. In counting 200 white blood cells, 15 monoblasts were found. Megaloblasts were absent. The hemoglobin index was 94. The oxidase reaction and Frey's epinephrin test were not performed. The blood Wassermann reaction was negative.

Dermatologic Condition.—The skin presented a mottled appearance, and was covered with small petechiae and larger coalescent hemorrhagic spots. They were most pronounced on the trunk and flexor surfaces of the extremities. Some of the purpuric lesions were bright red, while others were fading away. The mucous membrane of the oral cavity and of the pharynx was studded with hemorrhagic lesions. Another type of skin eruption consisted of bluish-brown papules and nodules. They were slightly elevated, discrete, globular, firm to the touch, and varied in size from that of a pinhead to that of a bean. They were scattered in large numbers over the trunk and extremities. A few of them could be distinguished on the face, behind the ear and in the oral cavity. They showed no tendency to ulceration except for a few lesions on the tonsils and in the pharynx. They caused no itching, nor pain on pressure. There were a few larger tumors of the same character. One, about 1.5 cm. in diameter, and a smaller lesion the size of a hazelnut were found on the left cheek. They were dark bluish, glistening, globular and sharply circumscribed. A similar tumor, the size of a dime, and one about 2 cm. in diameter, were present over the lower half of the sternum. A few others were scattered over the body. The largest tumor was found on the left inner thigh. It reached the size of a quarter and was markedly elevated over the skin. The lymphatics were infiltrated and presented small discrete nodules in the submaxillar fossa, around the neck and behind the ear. The largest glandular masses were confined to the groins. They were bubo-like structures, the individual glands reaching the size of a pigeon's egg. They were hard, not tender and not attached to the skin. Some of them were less discrete and branched out in cordlike streaks along Poupart's ligament.

Histologic Examination.—One of the nodules was excised and biopsy was performed. The pathologist reported "lymphocytic infiltration" of the skin. The distribution of the infiltrating process, with reference to the various structures of the skin, was not mentioned in the report. Examination of the blood expressed from a similar lesion gave the following differential count: polymorphonuclear cells, 29.5 per cent.; myelocytes, 2 per cent.; myeloblasts, 1.5 per cent.; lymphocytes, 59 per cent. and monocytes, 8 per cent.

Course of the Disease.—On Dec. 12, 1922, the patient left the hospital, on his own request. He was subjected to deep roentgen-ray therapy, applied to the spleen and to some of the skin tumors. He received injections of sodium cacodylate every other day. Under this combined treatment, the spleen shrank

considerably in size, and some of the skin lesions seemed to undergo involution. They flattened out, changed from bright blue to a grayish brown, and became softer to palpation. However, new lesions appeared in spite of the treatment, and hemorrhages into the skin and mucous membrane were more profuse than ever. The patient began to complain of frequent choking spells, and was confined indoors most of the time. He was losing strength rapidly, and the pain in the spleen region was rather severe at night. He had one attack of auricular fibrillation, which did not recur during the time of observation. The blood examined on several occasions showed a slight increase in the white blood count to about 15,000. One laboratory reported a myelocytosis of 66 per cent (?). Under the impression that arsenicals were not borne well by the patient, the



Myeloid leukemia; author's patient.

cacodylate injections were discontinued after four weeks of adminstration, and a few more roentgen-ray doses were ordered. The patient was seen for the last time on Jan. 28, 1923. His sclerae were subicteric. The former skin tumors were much smaller, some of them about one-third of their previous size. The lymph nodes in the groin were likewise smaller and softer. There was a new skin tumor behind the left ear. The spleen was barely palpable. The patient gained in weight but felt very weak and was confined to bed much of the time. He had no rise in temperature during the time of observation, and the urine was negative. The patient, disappointed with the progress of the disease, looked for salvation in a quick change of medical advisors and was lost track of. He died a few months later.

The accompanying illustration was taken in the middle of January, 1923.

SUMMARY AND COMMENT

Two conditions were thought of as a possible diagnosis. They were—malignant metastasis of the skin and idiopathic multiple hemorrhagic sarcoma of Kaposi. On further analysis both were discarded as lacking the essential diagnostic features. The diagnosis of myeloid leukemia of the skin was finally adopted on the following grounds:

1. The rather sudden development of bluish tumors and nodules, scattered mostly on the trunk and extremities, which presented a globular appearance, were firm to the touch, showed no tendency to ulceration, and were practically painless, with no history of malignancy in the internal organs.

2. The hemorrhagic diathesis of the skin, including the mucous membrane, in a well nourished person who was not conscious of any grave constitutional disturbance.

3. The glandular enlargement in the groin which was painless, not adherent to the skin, more or less discrete, with no signs of ulceration.

4. The enlargement of the liver and spleen, with symptoms of pain in the latter, which in all probability were due to perisplenitis and splenic infarcts.

5. The atypical blood picture with the appearance of unripe myelogenous elements. The relatively low white blood count classifies the case as a subleukemic stage of myelogenous leukemia.

6. The results of the biopsy were rather inconclusive for a typical myeloid leukemia of the skin. Incidentally one is reminded of Ketron-Gay's case in which a section made of a skin nodule resulted in "the consensus of opinion that the condition was not that of a myeloid leukemia," although the latter diagnosis was fully confirmed by necropsy.

7. The absence of fever and the comparatively slow progress of the disease differentiates the case as chronic in contradistinction to the fulminating (leukoblastic) form of myelosis.

29 East Seventy-Seventh Street.

STUDIES OF FUSIFORM BACILLI AND SPIROCHETES

XI. FURTHER OBSERVATIONS ON THEIR DISTRIBUTION ABOUT THE GENITALIA OF NORMAL WOMEN AND THEIR SIGNIFICANCE IN CERTAIN GENITAL INFECTIONS AND TUMORS *

I. PILOT, M.D., AND A. E. KANTER, M.D.

CHICAGO

In a previous study [1] the normal smegma, particularly about the clitoris, was found to harbor spirochetes, together with fusiform bacilli in twenty-one of thirty-six women (58 per cent.). Spirochetes have been observed by others (Csillage [2] and Rona [3]) in normal women, but fusiform bacilli were described with the spiral forms only in ulcerative conditions of the vulva. Our observations have revealed that bacilli as well as spirochetes are to be considered normal inhabitants of the external genitalia. Associated with these organisms are invariably pyogenic bacteria, such as staphylococci, streptococci, colon bacilli, diphtheroids and others.

In the present study, the distribution of these organisms in the vaginal tract and in certain pathologic conditions was noted. For the demonstration of these organisms, 5 per cent. carbol fuchsin and the Fontana method of staining spirochetes were employed. Smears were made from various parts of the vaginal tract of fifty-four women, chiefly in the early months of pregnancy, who were free from abnormal discharges. In none were spirochetes demonstrated; fusiform bacilli were observed in few numbers in only three instances.

It is obvious that these organisms do not find conditions favorable for their existence in the vagina. Further observations were then made of the vaginal discharges, many of which were of foul odor. In sixty-one patients with leukorrhea, no spirochetes were found. In only two were fusiform bacilli in small numbers present. In two instances in women with slight cervical discharge and negative blood Wassermann tests, short spiral forms with two to four undulations were observed, but no bacilli accompanied them. They appeared much shorter than

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* From the Department of Pathology and Bacteriology, University of Illinois College of Medicine and from the Lutheran Deaconess Hospital, Chicago.

1. Studies of Fusiform Bacilli and Spirochetes III, Pilot, I., and Kanter, A. E.: J. Infect. Dis. **32**:204-207, 1923.

2. Csillage: Arch. f. Dermat. u. Syph. **46**:150, 1898.

3. Rona: Arch. f. Dermat. u. Syph. **67**:259, 1903.

the spirochete observed in the smegma, and it is doubtful that they can be classified as true spirochetes. Apparently, these organisms play no rôle in infections causing leukorrhea.

We have found that they play an important rôle in ulcerative conditions, associated always with other organisms. In the male erosive and gangrenous balanitis, the fusiform bacilli and spirochetes occur in large numbers.[4] Similarly in the female an analogous condition due to the same organisms occurs as erosive clitoritis and vulvitis.[3] In noma of the vulva,[5] these organisms have been described. We have observed one instance of erosive vulvitis in a young woman who presented superficial erosions and a shallow ulcer with no induration on the labia. In the dark field, only short slender spirochetes and bacilli but no *Spirochaeta pallida* were seen. In the stained smears, the fusiform bacilli and spirochetes were seen, together with cocci in moderate numbers.

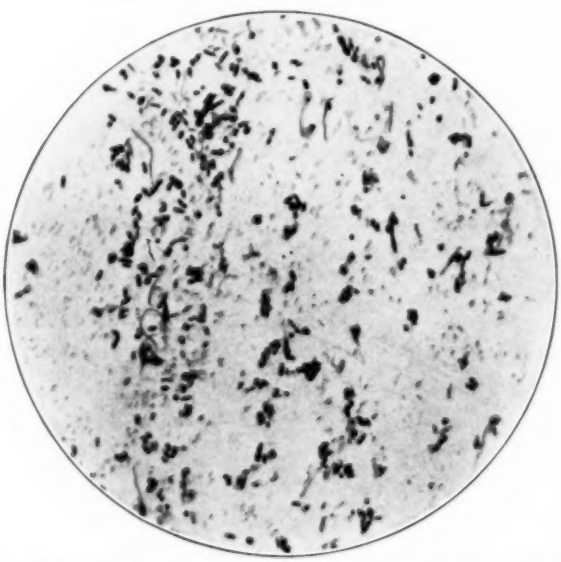

Fig. 1.—Fusiform bacilli in the normal female smegma. Many cocci and other bacilli are also present.

In syphilitic lesions, the smegma spirochetes together with *Spirochaeta pallida* have been frequently observed. Likewise, in condyloma of the acuminate type, many spirochetes, fusiform bacilli and cocci occur in the foul secretion.

In ulcerating tumors, these organisms may be found in great abundance and are responsible for the foul odor often present. In a

4. Studies of Fusiform Bacilli and Spirochetes, Brams, J.; Pilot, I., and Davis, D. J.: J. Infect. Dis. **23**:159, 1923.

5. Am. J. M. Sc. **122**:527, 1901.

large pedunculated fibroid which protruded through the cervix and vagina, the surface was shaggy and foul smelling. Smears revealed numerous fusiform bacilli, spirochetes and cocci. In aerobic cultures, *Staphylococcus albus,* and in anaerobic cultures, pleomorphic forms of fusiform bacilli, were obtained. In microscopic section, the tumor was a benign growth, a typical fibromyoma with superficial necrosis on the surface. Levaditi preparations showed the spirochetes and bacilli confined to the necrotic areas.

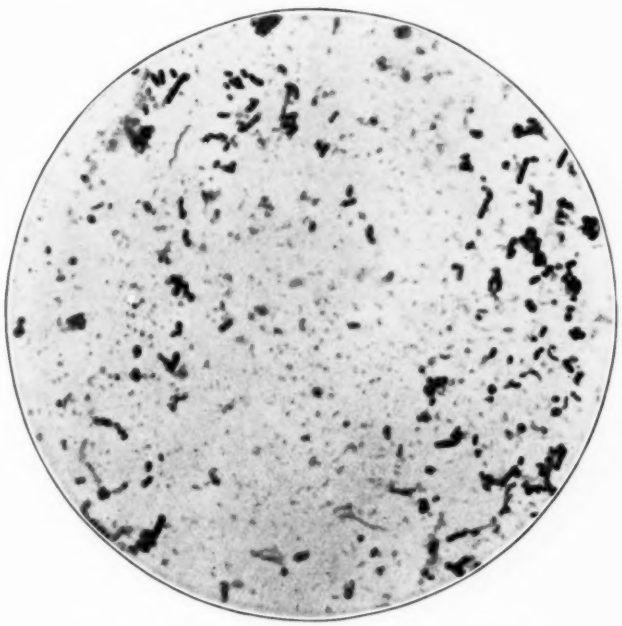

Fig. 2.—Spirochetes in normal female smegma.

In two patients with ulcerating carcinoma, these organisms were found on the surface. In one, the circinoma was a moderately advanced ulcerating lesion of the cervix; in the other, a squamous cell carcinoma of the vagina associated with prolapsus uteri. The bacilli occurred in the necrotic lesions in abundance, while the spirochetes were comparatively few in number.

A comparative study of the smears and cultures from the normal smegma secretions and from the ulcerative lesions revealed these organisms to be morphologically identical. The fusiform bacilli usually appeared as straight or slightly curved rods, tapering into sharp or blunted ends (Fig. 1). Occasionally long thread forms occurred, especially in the anaerobic cultures. The bacilli stained solid or as granular types. The organisms grew only anaerobically [1] and produced a dis-

tinct putrid odor in the mediums. The spirochetes were variable in size, presenting from five to fifteen undulations, fine or coarse (Fig. 2). Frequently they occurred in groups. They were gram-negative and actively motile. They are distinctly morphologically different from *Spirochaeta pallida* and are usually referred to as *Spirochaeta refringens*. In the aerobic cultures, these organisms were associated quite constantly with *Staphylococcus albus*, *B. coli*, diphtheroids, streptococci and large gram-positive bacilli.

Since the organisms in the normal smegma appeared to be identical with those observed in the pathologic conditions, it would seem that the fusiform bacilli and spirochetes are saprophytic ordinarily, but under certain conditions they may become pathogenic. Usually ulcerative lesions are excellent soil for their growth, with the result that the ulceration becomes more extensive and progresses into a necrotic and putrid process. While these organisms for the most part are of low pathogenicity and cause secondary infections, occasionally under unclean conditions and greatly lowered resistance they may become primary infective agents. In noma of the vulva, they play such a rôle and may even cause epidemic infections.[5]

From our observations, we have found that these organisms may readily be reduced in number by hygiene of the vulva. Cleansing measures are especially important in connection with genital lesions and in persons profoundly weakened by acute or chronic disease.

SUMMARY

Fusiform bacilli, as well as spirochetes, are frequently present in the smegma secretion of a normal woman. They are usually absent in the cervix and vaginal tract.

They play no rôle in the production of leukorrhea.

They are important infecting agents in syphilitic lesions of the vulva, erosive and gangrenous vulvitis, condylomata acuminata, necrotic fibroids and carcinoma of the uterus and vagina. Infection with these organisms is characterized by necrosis and foul odor.

The presence of these organisms normally would indicate that many ulcerative processes about the genitalia are due to autogenous infection and are not necessarily the result of bacteria from other sources.

SCROFULODERMA GUMMOSA (TUBERCULOSIS COLLIQUATIVA)*

H. E. MICHELSON, M.D.

MINNEAPOLIS

The cutaneous reaction brought about by the tubercle bacillus is polymorphous. While this polymorphy is not as great as that found in syphilis, nevertheless, there is an apparent analogy. In syphilis the examination for the spirochete, the Wassermann reaction and the response to antisyphilitic therapy are determining factors. Unfortunately, in tuberculosis the bacillus can be recovered only with difficulty, and there is no particular diagnostic test and no specific therapy. These factors make the problem of cutaneous tuberculosis a difficult one.

Cutaneous tuberculosis is divided into two main classes. First, true tuberculosis of the skin, which includes those forms in which the tubercle bacillus has been demonstrated with certainty, and, second, the so-called tuberculids or toxicodermas of suspected tuberculous origin. Fortunately, the tuberculid group is becoming smaller and smaller, and as more consistent positive findings are registered, certain clinical forms will be definitely recognized as true tuberculosis, and their origin no longer questioned.

A form of cutaneous tuberculosis which has received but meager description in our literature is the so-called scrofuloderma. This name has been given to the fistulous openings of sinuses originating in tuberculous glands and bones. Zumbusch [1] has emphasized this improper use of the term, for, as he states, the derma has nothing to do with the process in the purely fistulous type developing from deeper structures.

DEFINITION

The term scrofuloderma or tuberculosis colliquativa should be reserved for that nodular type of cutaneous tuberculosis which begins in the deeper layers of the skin. Jadassohn has defined this type as that form of cutaneous or subcutaneous tuberculosis which in the majority of cases begins as a circumscribed node that softens, perforates and forms ulcers and possesses peculiarities which make a characteristic clinical picture.

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* Read before the Section on Dermatology and Syphilology at the Seventy-Fifth Annual Meeting of the American Medical Association, Chicago, June, 1924.

1. Zumbusch, Leo von: Diagnostik und Therapie der Haut Tuberkulose, München. med. Wchnschr. Sept. 9, 1922, p. 1313.

EARLIER LITERATURE

The condition has been well described by the older French writers, who used the fitting name of scrofulous gumma.

In 1883, E. Besnier [2] wrote a detailed and accurate description of this type of tuberculosis, referring to the earlier writings of Alibert and Delpech (1816). Besnier insisted that the name scrofulous gumma be retained, since the condition had the appearance of a syphilitic gumma. He described four varieties: (1) dermic, (2) hypodermic, (3) supra-aponeurotic and (4) subaponeurotic.

In 1891, Leloir [3] related his experiments in attempting to recover the tubercle bacillus from skin lesions. He established the fact that the age of the lesion at the time of excision and the amount and character of the tissues used were important factors in determining the presence of the bacillus. He also made the observation that tissue excised from early lesions showed tubercle bacilli more often than when caseation had occurred.

The modern German literature contains many instructive contributions on tuberculosis of the skin. Especially enlightening are the writings of R. Volk [4] who has made painstaking efforts to recover the bacillus from various forms of cutaneous tuberculosis. He has laid special stress on the important rôle that the state of general and local immunity plays in the production of lesions. Kyrle,[5] in discussing one of Volk's papers, cites an instructive case of lupoid of Boeck, which he observed through two distinct outbursts, where in each attack an acute erythematous stage preceded the typical lupoid lesions. Kyrle was able to demonstrate the tubercle bacillus in section and by guinea-pig inoculations during the acute stage, but in the lupoid stage his results were negative. This may throw some light on the protective mechanism of tuberculoid structure. Kyrle also injected animals with blood taken at the inflammatory stage and obtained positive results. These observations establish the necessity of making searches for bacilli in the earliest stage possible, and they also show that hematogenous dissemination of live bacilli occurs in this particular form of tuberculosis. Kyrle did not state in his brief discussion whether tuberculosis had been demonstrated in other organs, but the case did show what Fischl [6] has recently con-

2. Besnier, E.: Des gommes Scrofûleuses, Ann. Dermat., May 15, 1883, p. 16.

3. Leloir, H.: Clinical Researches, Anatomical and Experimental, in the Combinations of Scrofulo-tuberculosis and Syphilis, J. Malad. Cutan. 1891, p. 475.

4. Volk, R.: Aetiologie und Pathogenese der Tuberkulide, Arch. f. Dermat. u. Syph. **133**:1, Ref., 1921.

5. Kyrle, J.: Discussion Volk's paper, Arch. f. Dermat. u. Syph. **133**:26, Ref., 1921.

6. Fischl, Friedrich: Die Hauttuberkulose als Organ System-Erkrankung, Wien. klin. Wchnschr., Aug. 23, 1923, p. 611.

tended, that the course of tuberculosis in an individual usually confines itself to a particular organ system. Where the first metastases are established (eye, kidney, skin, etc.), there the subsequent metastases are most likely to occur, and with the participation of one organ system, the other systems are usually spared.

What has been cited in general concerning recovery of bacilli probably holds true also for tuberculosis colliquativa (scrofuloderma). Zieler[7] quotes a number of authors who, in direct smears, found as high as 75 per cent. positive for tubercle bacilli. He also states that primary exogenous cases are extremely rare. Hematogenous origin is possible, but lymphatic dissemination from some other focus or by contiguity seems to be the most likely route. In this connection, one is reminded of the investigations of Peters and Brock,[8] who applied the conceptions of Ranke, Cornet, Ghon and others to the subject of skin tuberculosis. Under this hypothesis, tuberculosis is viewed as a disease which can easily be divided into stages, the first stage being a minute pneumonic focus with infected regional glands. The second stage is that of generalization. The disease, of course, often remains limited to the first stage, but generalization may take place by the blood or lymph streams, giving rise to the various forms of tuberculosis. The third stage is that of isolated tuberculosis. By this time, the cellular and constitutional immunity of the individual has become well established, and further metastases are not probable. Extension from then on takes place by contiguity. Peters and Brock closely examined the records in 112 cases of skin tuberculosis. It is sufficient for us to state briefly that practically all of their cases either gave evidence of previously existing tuberculosis, signs of generalization or coexisting tuberculosis of other organs. They mention tuberculosis verrucosa cutis (verruca necrogenica) and circumcision tuberculosis as alone being characteristic for exogenous infections.

SYMPTOMATOLOGY OF TUBERCULOSIS COLLIQUATIVA

Children are more frequently affected than adults, and in them the condition is likely to occur in the skin overlying tuberculous glands, bones or joints. In adults, the face, the neck, areas over osseous projections and epiphyseal regions are the sites most frequently invaded. Tuberculosis of underlying structures may exist for a long time before

7. Zieler, Karl: Hauttuberkulose und Tuberkulide, Wiesbaden, J. F. Bergman, 1914, p. 299.

8. Peters, R., and Brock: Die Hauttuberkulose in Rahmen der neueren pathogenetischen und pathologisch-biologischen Forschung, Arch. f. Dermat. u. Syph. **146**:111, 1923.

the overlying skin becomes involved, or a fistulous tract may develop without nodular formations. It is at times difficult to determine from whence the infiltrate is arising.

The skin may not be much involved in spite of the extent of the deeper infiltrate. Tuberculosis of glands or bones which lie just beneath the surface may exist for a long time before the overlying skin is infected; when this occurs it is by peripheral extension.

The mucous membranes are almost never the site of colliquative tuberculosis. Lewandowsky,[9] however, mentions one case of a scrofulous gumma of the tongue. The condition usually begins insidiously with an indolent infiltration or a node situated subcutaneously. There may be a solitary node, a group of several nodes or a conglomerate mass which may remain as such for weeks, causing little pain. A slight inflammatory zone may develop about the areas, and the deeply situated lesions apparently rise, becoming adherent to the skin. Considerable pain may develop, causing the patient to seek relief by poulticing or incision. The overlying skin becomes discolored to a livid red or purplish hue. The center shows signs of regression, while at the periphery the inflammatory zone becomes more noticeable. As the process continues, the central portion softens, giving an impression of fluctuation, but if incision is made then the small amount of fluid present will be decidedly deceiving. The limits of the lesion are sharply outlined. Several nodes may develop at the same time, or a number of nodes in various stages of progression may be present. More often one or two larger nodes will run their full course before new ones in the adjacent areas are noticeable. Sometimes the condition will remain stationary, not perforating for a long time. When regression continues in the center of the node, the overlying skin, which is then adherent to the mass, becomes darker, and bulging is noted. Pressure or movement of the part causes pain. Pus develops only after long periods of evolution.

If perforation takes place, several small openings may form simultaneously with slow elimination of the contents. The deeper the node is situated, the slower is the evacuation, but at no time is the discharge as chronic as in the case of tuberculous adenitis. If incision is made, there is a discharge of serous or bloody serous fluid—rarely is the discharge caseous. There is never as much pus as in a frank phlegmon. Jadassohn's investigations have shown that softening and perforating are not dependent on secondary infection.

After incision of the nodosity there is little diminution in the size of the tumor, a curet being necessary for complete removal. At times

9. Lewandowsky, F.: Die Tuberkulose der Haut, Berlin, Julius Springer, 1916, p. 148.

the perforations are several in number and quite a distance from one another, and often connected by subcutaneous passages. Again superficial tracts may develop apparently along the lines of the lymphatics connecting several nodes, forming the so-called tubular scrofuloderma (Röhrenförmiges Skrofuloderm of Unna). Successive perforations of several nodes is common. After perforation, fistulas, cul-de-sacs or ulcers may result and remain unaltered for a long time.

When ulcers result the edges are thin, frayed-out, and undermined, of irregular outline, sometimes serpiginous, and because of the juxtaposition of several ulcers and fistulas a labyrinthous mass may be formed. The periphery of the ulcer remains livid. The base is granular, and the discharge is a decidedly tenacious pus, which may be blood tinged. Crusting is the exception. Dermic bridges may run across the ulcer. Sometimes ulceration proceeds until considerable destruction has taken place.

Fig. 1 (Case 1).—*Scrofuloderma gummosa* (tuberculosis colliquativa) of right forearm. Ulceration is biopsy wound.

Case 1.—(From General Hospital Dispensary.) Mrs. N. H., aged 38, who had no children, first seen, June 21, 1922, said that two years before an area at the base of her right hand became inflamed like a boil. It was seen by a physician, who made an incision, and it oozed a small amount of pus for four weeks. A new area developed an inch and a half higher up. This the physician called a "blind boil." It was poulticed and then incised, and it discharged for twelve weeks. In March of the past year the patient developed two other similar nodes farther up on the forearm, which gradually enlarged until they attained the size of a half dollar. Pain was present only when she struck the part. At the time of examination, there were three firm nodes situated in the hypoderm, whose borders were not distinct. The skin over the part was a purplish blue and was adherent. There was a sensation of fluctuation in the center of one of the nodes. No ulceration was present. General examination was negative. The patient was in excellent health. The roentgenologist reported the patient negative for tuberculosis. A Pirquet test was positive. The Wassermann test was negative. Animal inoculations made with excised bits of subcuticular tissue were negative. Diagnosis from microscopic section was *Scrofuloderma gummosa* (tuberculosis colliquativa) (Figs. 2 and 3).

Fig. 2 (Case 1).—Microscopic section, low power, showing dense granulomatous mass situated deep in the cutis, composed of lymphocytes, epithelioid cells, plasma cells and many giant cells.

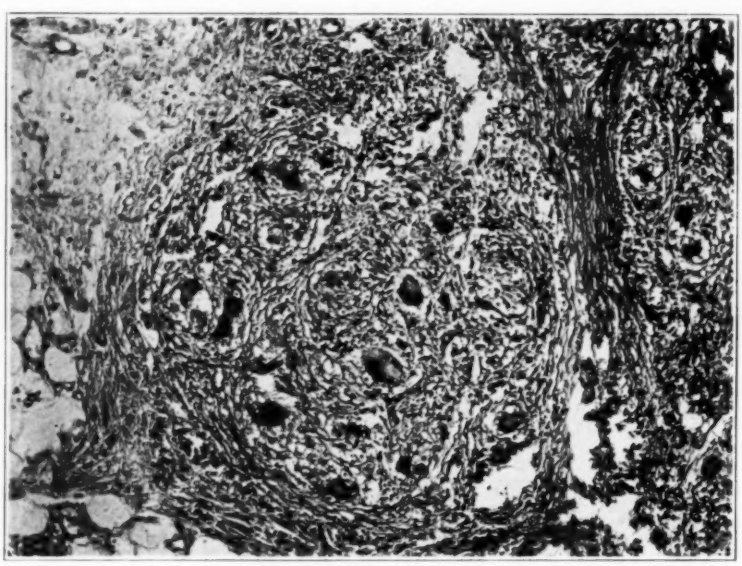

Fig. 3 (Case 1).—A small tubercle at periphery of granulomatous mass, under a high power lens, showing detailed structure. The section was especially rich in giant cells.

CASE 2.—(From Minneapolis General Hospital.) G. S., aged 44, single, a porter, entered the hospital on Nov. 11, 1923. The family and past history have no bearing on the skin condition. He had a chancre in 1920, which was treated at the university dispensary. His Wassermann reaction was still positive, and he received a full course of neo-arsphenamin while in the hospital, with no affect on the lesions.

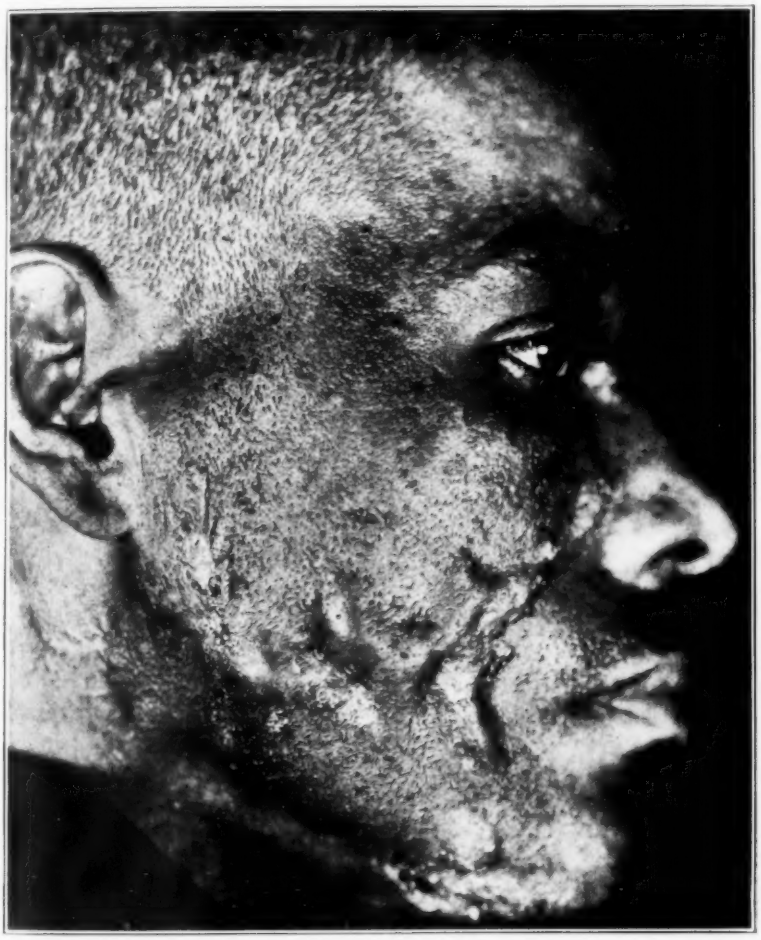

Fig. 4 (Case 2).—*Tubular scrofuloderma* (tuberculosis colliquativa) of face.

Briefly, the history of the skin condition is as follows: He said that a node developed under his chin when he was a child, which a physician incised, and it oozed pus for a long time, finally healing. In 1921, a small mass developed in the right submandibular region. A physician incised this and treated it for over a year. The process extended to the right side of the face. At the present time he has a widely distributed, bluish, soft sinus-like tubular lesion, extending from the point of the chin back to the angle of mandible and from thence to the

Fig. 5 (Case 2).—Low power section from border of an ulcer showing nonspecific, diffuse, cellular infiltrate in the cutis and the epithelium growing on the under side of the ulcer wall.

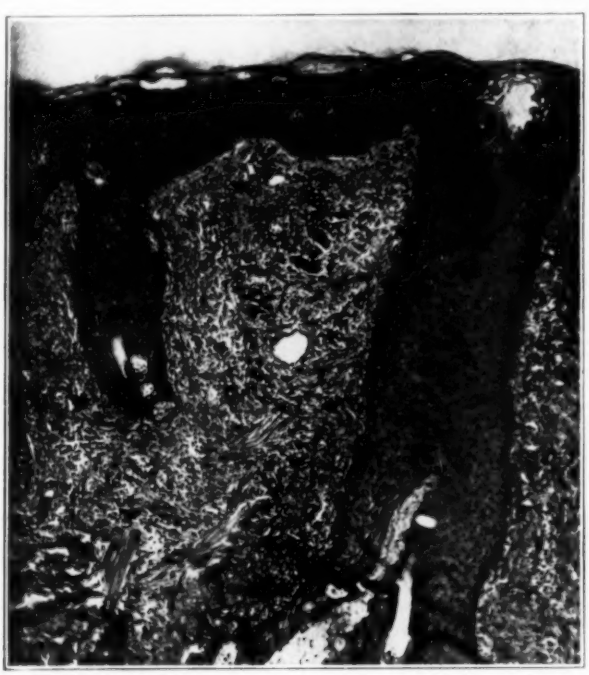

Fig. 6 (Case 2).—High power magnification of tuberculoid structure just beneath the epithelium.

inner canthus of the right eye. There are numerous small openings which ooze a serous pus. Pressure at one point causes pus to exude from a distant opening. The left side of the face is involved in a similar manner. Material taken by excision and injected into a guinea-pig resulted in miliary tuberculosis of the guinea-pig, with numerous tubercle bacilli demonstrated in sections. The roentgenogram of the chest showed no active tuberculosis; the frontal sinuses showed cloudiness. Treatment of the sinuses was instituted by the rhinologist,

Fig. 7 (Case 3).—*Scrofuloderma gummosa* (tuberculosis colliquativa) of cervical region.

without effect on the skin lesions. Diagnosis was tuberculosis colliquativa (tubular scrofuloderma). (Figs. 5 and 6.)

Case 3.—(From General Hospital Dispensary.) Mr. K., aged 75, with a negative past history, said that his skin condition began six months previously with a small node situated on the right side of the neck. He thought this was a boil. The node gradually enlarged, softened, and emitted a small amount of pus. Two similar nodes developed on the left side of the neck and have been

draining for the past six months. Inoculations of guinea-pigs with the discharge were positive for tubercle bacilli. Treatment with the Alpine sun lamp and roentgen rays has been unsuccessful to date. The diagnosis was *scrofuloderma gummosa* (tuberculosis colliquativa).

HISTOPATHOLOGY

The histopathology as recorded here is based on the three cases reported and on the descriptions of Lewandowsky and Zieler. One is impressed with the fact that sections from different cases which are clinically similar may vary a great deal. In one of our cases, the histology was that of typical tuberculosis. The excision was made from a nodular lesion before perforation. The epithelium was unaltered, with the exception of a slight thinning and flattening of the rete pegs. A dense infiltrate made up of lymphocytes, epithelioid cells, a few plasma calls and many large giant cells, was situated in the cutis. The central portion of the section showed diffuse tuberculous structure, while at the periphery typical tubercles were found. The section was exceptionally rich in giant cells. No areas of necrosis were seen. Numerous sections were stained and carefully examined for tubercle bacilli, but none were discovered. Collagen bundles were not found in the mass, and elastic fibers were seen only as remnants. Blood vessels, although not entirely absent, were few in number.

In the second case, the histopathology was largely of a nonspecific character. Wide excisions were made four times over a period of six months and from lesions in various stages of evolution. After a long search, typical tubercles were found situated just beneath the epithelium in a section made from an old lesion.

Guinea-pig inoculations with excised material proved positive for tubercle bacilli in two of the cases. One case showed what Jadassohn has called attention to, namely, the tendency of the epithelium to grow in at the edges of the ulcer and to continue into the cavity, making a lining; so that if one excised a portion of the overhanging ulcer wall, epithelium would be found both above and below.

DIAGNOSIS

Diagnosis of scrofulous gumma (tuberculosis colliquativa) is always difficult even if its presence is suspected. Moreover, many diagnosticians do not even consider it as a probability. It is most likely to be confused with a syphilitic gumma. In the nodular stage, clinical differentiation at times is almost impossible. After ulceration, diagnosis may be somewhat easier. When the lesion is over a projecting bone, the two conditions are almost identical, and diagnosis will have to depend on serologic and bacteriologic findings. Age is of some help. Tuberculosis is commoner in childhood and adolescence, especially in the

cervical region. Evolution as a rule is more rapid in tuberculosis. On this point, there is some discrepancy of opinion. The older French authors emphatically state that perforation is more rapid in tuberculosis; while the modern German authors say that it occurs sooner in syphilis. From our own observations, we would say that the length of time necessary for the perforation of a syphilitic gumma varies decidedly. Sometimes it remains solid for a long time. In tuberculosis, on the other hand, softening is likely to be an early occurrence, and several nodes in various stages of progress are usually present in adjacent tissue, while in syphilis multiple gummas in close proximity are not common.

After ulceration, a syphilitic gumma has a sharper outline with steeper walls of a punched-out appearance. The periphery is harder, and the discharge scantier. In tuberculosis, the borders of the ulcer are thinned out, undermined, shallow and the periphery more inflammatory.

The color of the lesions is of some importance. Tuberculosis, when typical, is a livid cyanotic blue, while syphilis has a reddish rusty color.

Scars, when present, are an aid. The syphilitic scarring is thin, glistening, almost transparent, of cigaret-paper thickness, with a pigmented areola; while in tuberculosis there is a thick, heavy, even keloid-like scar which may cause distortion of the part.

Pain is mentioned as being more severe in syphilis, but here again we believe that individual variation is too great to be of diagnostic value.

Histologically, sections from tuberculosis and syphilis may be decidedly alike. When typical tubercles are present, when epithelioid cells predominate, when vessels are few in number, one may incline toward the diagnosis of tuberculosis; plasma cells, more diffuse arrangement and lack of tubercle formation favor syphilis. Giant cells may be present in either.

The Wassermann reaction, local and general reaction to tuberculin and animal inoculations are factors, which, when positive, make the diagnosis more certain. Reaction to potassium iodid was the test insisted on by the elder clinicians, and is of value today. Response to arsphenamin and mercury should not be used as therapeutic tests, for tuberculosis has been known to respond to both of these remedies.

Diagnosis between tuberculosis and syphilis, of the gummatous type, must therefore be made with great caution, and can only be made with certainty when the preponderence of diagnostic evidence favors one or the other condition.

Sporotrichosis must also be taken into consideration. Of this the arrangement along the lymphatics, the acute onset, the crater-like, superficial, elevated lesions and the cultural findings are the distinguishing diagnostic features.

There is no danger of confusion with ordinary pyogenic infections which are diagnosed by the signs of acute inflammation and copious discharge. It is well, however, to remember Volk's [10] warning that when the healing of a furuncle is unduly delayed one should be suspicious of a tuberculous process.

COMPLICATIONS

The only complication, if it may be called a complication, is lupus vulgaris, which Pautrier [11] and others have observed occurring in the scars of scrofuloderma. Generalized tuberculosis can hardly be looked on as a complication of skin tuberculosis.

PROGNOSIS

Jessner [12] states that there is usually a marked tendency to spontaneous healing in all forms of tuberculosis colliquativa. Healing of the individual lesions depends on the speed of evacuation. As the discharge diminishes, the orifices narrow down, becoming harder and livid, angry looking scars often being formed. Hypertrophic, keloid-like scars may develop, enclosing small pockets of pus, which may empty and fill again and again. Local recurrences are common.

The general prognosis is dependent on the constitutional strength of the individual. Undoubtedly, many children who have scrofuloderma at a young age, later die from other forms of tuberculosis. An important factor in prognosis is a social position which makes the most favorable environment possible.

THERAPY

For tuberculosis colliquativa, Volk [13] simply recommends roentgentherapy, heliotherapy and tuberculin. Certainly there is no specific course to outline. In one of our cases healing occurred under mercury-vapor lamp exposures alone, while in another case there was little response to all of the foregoing recommendations. Volk,[14] in a later communication, highly praised filtered roentgen rays as giving the quickest result and the healthiest scars. General treatment is the same as for any type of tuberculosis, and is especially important in this form in children.

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10. Volk, R.: Personal notes.

11. Pautrier, L. M.: Les Tuberculoses Cutanées in Dermatologie, Paris, A. Maloine et Fils, 1923, p. 568.

12. Jessner, S.: Hauttuberkulose, Wurzburg, C. Kabitzsch, 1909, p. 54.

13. Volk, R.: Die Therapie der Haut Tuberculose, in Handbuch der gesamten Tuberkulose Therapie, Wien., Urban & Schwarzenberg, p. 1298.

14. Volk, R.: Die Roentgen Therapie der Hauttuberkulosen, Wien. klin. Wchnschr. 1923, No. 3, p. 1.

CONCLUSION

Tuberculosis colliquativa (scrofuloderma gummosa) is a distinct type of true cutaneous tuberculosis which does not necessarily arise from tuberculous glands or bones, but may begin in the cutis or subcutis.

DISCUSSION

Dr. O. S. Ormsby: At the Fourth International Congress it was practically agreed that if a group can agree on anything of a scientific nature, the scrofulodermas should include all types of tuberculosis cutis in which infection of the skin occurs by direct contiguity from a focus beneath, such as those mentioned by Dr. Michelson. I think that is a good definition, and we have adhered to it for several years. The deep nodular tuberculosis described by Dr. Wende was a different type. It resembled the scrofulodermas, but it did not break down and had more bacilli. The type that Dr. Michelson emphasizes and terms "tuberculosis colliquativa" is the type in which the primary lesion resembles a gumma and was early described by the French under the title of "scrofulous gumma." We have all seen these cases. They occur principally in children and often on the face as well as in other situations. All types of scrofuloderma occur more frequently in children than in adults. Tuberculosis colliquativa begins in the subcutaneous tissue and invades the overlying skin by direct extension, and thus fulfils the requirements of the definition of the scrofulodermas. Occasionally gummatous-like lesions form over infected glands and bones by extension of the process upward, but as a rule when seen they have broken down and exhibit ulceration as the chief feature. Occasionally, six or eight of these may be present at once. Ulceration in this type may be extensive, at times covering the entire side of the neck. The ulcers in the type described, particularly by Dr. Michelson, are usually smaller. The emphasis placed by Dr. Michelson on finding tubercle bacilli in the earliest lesion is important, as in older lesions they are very different to isolate. This observation applies to some tuberculids.

His mention of lupus vulgaris being a complication is interesting, because years ago the occurrence of lupus nodules in the margin of a scrofulodermatous ulcer proved the identity of a single cause of the affections.

Concerning treatment, I agree with Dr. Michelson, and in addition we have used phototherapy with success. In some of these children, the combination of arsphenamin and phototherapy gives good results. Sometimes it is necessary to use some surgical measures in addition.

Dr. Grover Wende: Dr. Michelson's paper is timely, as subcutaneous tuberculous lesions do begin independently of demonstrable lymph nodes. In the case reported several years ago by myself, just referred to by Dr. Ormsby, and described as "nodular tuberculosis of the hypoderm," there was no ulceration. The lesions were limited to the face; they began at a point on the forehead and gradually extended so as to encircle the entire face. Animal inoculation proved the hard nodules to be tuberculous.

At the present time I have a case in which the nodules are pretty generally distributed over the entire body, of which many have gone on to ulceration. The development and involution of these lesions quite clearly correspond to those in the cases of Dr. Michelson. I am of the opinion that many cases are

recorded which properly could be included under Dr. Michelson's description—cases that begin primarily in the subcutaneous tissue and independent of any gland or bone involvement.

Dr. Henry E. Michelson: I tried to bring out the necessity of making a diagnosis of the particular type of cutaneous tuberculosis, as this is important from a prognostic point of view. For instance, in the type described by Dr. Morrow, the prognosis as to life is very poor. Most of these patients succumb to general tuberculosis soon after the lesions in the mouth appear.

UNIVERSAL LEUKEMIA CUTIS*

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It is well known that many diseases of the hemiopoietic system present cutaneous manifestations at some time during the course of their evolution. In 1876, Biesiadecki [1] called attention to these changes when he reported a case of true leukemia with multiple small leukemic tumors in the skin.

Cutaneous reactions occur in both general types of leukemia but are notably more common in the lymphatic variety. These visible expressions may take the form of petechiae, vesicles, papules, pustules, wheals, nodules, tumors and localized or general infiltrations. Not infrequently combinations of one or more of these forms exist, excepting the generalized form, which is thought to occur independently. In addition, there may be present pigmentary changes; and sensory disturbances, in a variable degree, may be complained of by the patient. Arndt,[2] in an excellent monograph read before this section in 1914, says that he prefers to divide these manifestations into two groups. The first group represents proper localizations of the lymphadenotic process in the skin and are the true cutaneous lymphadenoses. The other group occurs in leukemia, but does not represent true leukemic infiltrations and is clinically indistinguishable from toxic dermatoses of different origin. These are known as the leukemids. Arndt [2] would also divide the true lymphadenoses into three forms, according to the blood changes: an aleukemic form if the blood is normal; a subleukemic form if the number of the white blood cells is normal or slightly increased, but the proportion of the lymphocytes augmented; and a leukemic form when there is an absolute permanent, progressive increase of lymphocytes and the total number of leukocytes is increased.

The lymphadenoses of the skin are clinically divided into the circumscribed form, which manifests itself by flat infiltrations or tumor-like swellings, with a predilection for the face and the extremities, and

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* Studies and contributions of the Department of Dermatology and Syphilology of the University of Michigan, service of Dr. Udo J. Wile.

1. Biesiadecki: Leukämische Tumor en der Haut, Wiener med. Jahrb. **3**:233, 1876.

2. Arndt, G.: Diseases and New Growths of Lymphatic Origin, J. A. M. A. **63**:1268 (Oct. 10) 1914.

a universal form. The latter form apparently does not occur in myeloid leukemia, as universal involvement of the skin with generalized hyperplastic proliferation of myeloid tissue is not recorded in the literature.

Universal leukemia cutis then refers to a universal lymphadenosis of the skin occurring in the course of lymphatic leukemia. In 1892, Riehl [3] recorded the first case of this disorder concerning which there can be no doubt clinically, hematologically or histopathologically. The histology and blood picture of Riehl's case agreed with that previously described by Biesiadecki [1] and others for the localized form of leukemia cutis, the essential difference being in the extent and character of the cutaneous involvement. Riehl's patient was a woman, aged 57, whose illness began in September, 1889, with a pruritic eczematoid condition of the neck. This rapidly extended and in the course of months involved the whole body. The skin for the most part was thickened and reddened and in places dry and scaly, while over the back there were several thinned, moist areas. The superficial lymphatic glands were enlarged, especially the cervical and inguinal chains, and varied in size from that of a pea to that of an apple. Later, one gland in the neck and another in the groin softened and broke down. The spleen and liver were definitely enlarged. The blood count revealed the proportion of white to red cells to be 1 to 24 or 26. Differential examination of the blood revealed a marked preponderance of lymphocytes with polymorphonuclears very much decreased. Eosinophils were scant, and the mononuclears were almost absent. No nucleated red cells were seen.

Arsenic seemed to improve temporarily the patient's general condition, but later she became progressively weaker, and on Oct. 16, 1891 (?) succumbed. Necropsy revealed a leukemic infiltration of the liver and spleen and a hyperplasia of the lymph glands, the lymph channels being choked with white corpuscles. The skin showed its smallest and what Riehl regarded as its earliest infiltrations around the sweat glands and blood vessels, which consisted of nests of small round cells. The skin also contained the typical leukemic infiltrate, involving especially the middle of the corium. The horny layer was thinned for the most part, but in some places was heaped up with the formation of a scale. The similarity of this case to mycosis fungoides was noted and discussed by Riehl.

Linser's [4] case reported in 1906 corresponds closely to the case described above and is undoubtedly the second example of true universal lymphadenosis of the skin to be recorded. While Rodler-

3. Riehl, G.: Ueber Leukaemia cutis, II. Intern. Dermat. Kongres, Wien., 1892, p. 156.

4. Linser, P.: Beiträge zur Frage der Hautveränderungen bei Pseudoleukämie, Arch. f. Dermat. u. Syph. **80**:3, 1906.

Zipkin's [5] case differed from the two previously reported in having a less characteristic lymphatic leukemic blood picture; it was nevertheless accepted by Arndt, and stands as the third recorded case. Arndt's [6] exhaustive study of this condition, with a review of the literature, includes the report of the fourth case, which he touched upon in his discussion of "Diseases and New Growths of Lymphatic Origin," before this Section ten years ago. In 1914, Bernhardt [7] published the report of a case (Case 1 of his series of seven cases), which corresponds in detail to that described by Riehl [3] and Arndt,[6] and which was the fifth recorded case of universal leukemia cutis.

Our attention was called to the rarity of this lymphadenotic erythroderma by the recent thorough report of Ketron and Gay.[8] Their case is an undoubted example of the true universal lymphadenosis of Riehl and Arndt, and is the sixth example reported.

The literature also contains numerous references to examples of a universal scaly erythroderma associated with a hyperplasia of the lymphatic structures but in which the hematologic examination did not reveal the presence of a leukemia. If we are to accept Arndt's classification, the latter cases must be regarded as examples of aleukemia leukemia or pseudoleukemia and not as true universal lymphodenoses of the skin, unless they present clinical, histologic and hematologic evidence of leukemia. Cases of universal scaling erythroderma which resembled universal leukemia cutis, but in which the blood picture was not that of leukemia, have been reported by numerous workers. Among those of especial interest are the cases reported by Nicolau,[9] Wechselmann,[10] Hazen,[11] Sweitzer,[12], Wise,[13], von Zumbusch,[14] Sequeira and Panton.[15]

5. Rodler-Zipken, R.: Ueber einen Fall von graszellinger lymphatischer Leukämie mit generalisierter Hauterkrankung, Virchows Arch. f. Path. Anat. **197**:135, 1909.

6. Arndt, G.: Zur Kenntnis der leukämischen und aleukämischen Lymphadenose (lymphatischen Leukämie und lymphatischen Pseudoleukamie) der Haut mit besonderer Berucksichtigung der klinischen und histologischen Diagnose und Differential diagnose, Dermat. Ztschr. **18**:1139, 1911.

7. Bernhardt, R.: Ueber die Leukamie der Haut, Arch. f. Dermat. u. Syph. **120**:17, 1914.

8. Ketron, L., and Gay, L.: Universal Lymphatic Leukemia of the Skin, Bull. Johns Hopkins Hosp. **34**:404 (Dec.) 1923.

9. Nicolau: Contribution a l'etude clinique et histologique des manifestations cutanies de la leucemie et de la pseudoleucemie, Ann. de dermat. et syph. **5**:753, 1904.

10. Wechselmann: Ueber Erythrodermia exfoliativa universalis pseudoleukaemica, Arch. f. Dermat. u. Syph. **87**:205, 1907.

11. Hazen, H.: Skin Changes in the Leukemias and Allied Conditions, J. Cutan. Dis. **29**:521, 1911.

(Footnotes 12, 13, 14 and 15 continued on next page)

REPORT OF A CASE

History.—J. W. P., a man, aged 56, a carpenter, was first seen on Oct. 12, 1919, complaining of a generalized eruption. The family history was in no way related to the present complaint. At the age of 21, the patient had had gonorrhea with no attendant complications or resultant sequelae. There was no history of syphilis. At the age of 50, a fine papular and vesicular eruption had appeared on both lower legs, which was extremely pruritic. This was treated as an "eczema," but did not respond to the therapy instituted; it gradually extended, until four years later the entire body was involved. Baths and many ointments had been used, but nothing seemed to influence favorably the course of the eruption. During the past year, he had been unable to work because of the marked fissuring of the palms, which, together with the sensations of chilliness and pruritus, constituted his chief complaints.

Examination.—The patient was a well nourished and well preserved man just beyond middle life, who walked into the clinic. He did not appear strikingly ill and was unusually cheerful and optimistic for one with such an extensive eruption. Involving the entire cutaneous envelop was an extensive scaling dermatitis, which was associated with a dull reddish discoloration. The exfoliation was abundant, being most marked on the extremities, and consisted of various sized flakes, the largest of which was the size of a quarter dollar. They were thin, dry, brittle and of a dirty gray tinge. The underlying skin was smooth, red and shiny, and except for a few artificially produced lesions where the scale had been pulled down to the "quick," there was no tendency toward weeping or bleeding. The skin appeared thickened and edematous, but to palpation was found to be firm and diffusely infiltrated, giving it the sensation one would expect from pliable leather. Associated with this thickening was a marked accentuation of the natural folds and lines of cleavage, which was particularly striking on the flexor surfaces and about the joints.

The palms and to a lesser extent the ventral surface of each finger and thumb presented a diffuse overgrowth which took the form of short, fine dirty brown filaments of epithelium. The natural folds of the hands fissured through this thickened epidermis, the combination of fissuring and thickening prohibiting complete extension of the fingers without marked pain. The soles and the ventral surface of each toe were involved in a similar though less extensive process.

Almost surrounding the malleoli of each foot and extending upward over the anterior surface of the lower one third of the leg were discrete and confluent papillomatous lesions. The individual lesions were about the size of a glass-headed pin and studded the anterior surface of the leg just above the ankle. The confluent lesions (Fig. 1) extended up from the sole in a 2 inch (5 cm.) papillomatous band, which practically encircled the instep. The surface of this epidermal overgrowth was distinctly verrucous, irregularly furrowed, dirty

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12. Sweitzer, S.: Leukemia Cutis, J. A. M. A. **67**:1511 (Nov. 18) 1916.

13. Wise, F.: Lymphadenosis Cutis Universalis Associated with Generalized Erythrodermia and Atrophy of the Skin, J. Cutan. Dis. **35**:669, 1917.

14. Von Zumbusch, L.: Erytherodermia (Pseudo) Leucaemia (Riehl), Arch. f. Dermat. u. Syph. **124**:57, 1917.

15. Sequeira, J., and Panton, P.: Lymphoblastic Erythrodermia, Brit. J. Dermat. & Syph. **33**:391, 1921.

gray, with a suggestion of brown, and raised approximately 0.5 cm. above the surrounding skin. The lesions were not painful or eroded and were relatively superficial. The dorsal surface of the fingers and toes, and to a lesser extent of the hands and wrists, presented many of these smaller papillomas, which later developed into the hypertrophic warty lesions, as shown in Figure 2. The marked dyskeratosis of the nails can also be seen in Figure 2. It will be noted that the nail plate is greatly thickened, especially as it emerges from the nail groove, while the free edge is uneven and thinned, and there is a distinct tendency for the nail proper to separate from the thickened perionychium. The nail was soft and friable and a dirty dark brown.

Fig. 1.—Discrete and confluent papillomatous lesions of leg and ankle.

The hair of the beard, axillae, pubis and body was almost completely absent, while the eyebrows, eyelashes and hair of the scalp was very much thinned and lusterless.

Both lower eyelids presented a moderate secondary ectropion with resultant hypertrophic conjunctivitis. The other visible mucous membranes apparently did not share in the process. Many carious teeth were present in both the upper and the lower jaw.

Neither the spleen nor the liver could be palpated, but there was a striking general adenopathy present, the enlarged glands being very firm to palpation,

painless and freely movable. The individual glands varied in size from that of an olive to that of a small orange, the largest of which were found in the groin.

No increased mediastinal dulness could be determined, but the heart was found to be slightly enlarged. Radiographically, the mediastinum was found to be entirely clear, with no displacement of the trachea. The heart was found to be slightly increased in its long diameter. On roentgen-ray examination of the chest it was found to be voluminous, long and deep, well illuminated throughout, without unusual opacities in the pleuritic or lung field. Examination of the urine did not reveal any evidence of nephritis, and the blood Wassermann reaction was negative.

Fig. 2.—Papillomatous lesions of foot. Shows also the striking dyskeratosis of the nails.

A tentative diagnosis was made of "dermatitis exfoliativa," etiology undetermined, and the patient was admitted to the hospital for further study. A blood count performed the next day revealed the following picture: hemoglobin, 86 per cent. (Sahli); red blood cells, 4,350,000; white blood cells, 30,500; differential count, 200 cells. The differential count revealed: polymorphoneutrophils, 28.5; polymorphoeosinophils, 0.5; small lymphocytes, 56.5; large lymphocytes, 10; large mononuclears, 4; transitionals, 0.5. From this and other similar blood counts, a diagnosis of chronic lymphatic leukemia was established, and several small pieces of skin were removed from the abdomen for histologic study. Micro-

scopic examination revealed the epidermis to be somewhat atrophic with a relative increase in the stratum corneum. The papillary layer of the corium showed a moderate infiltration with lymphocytes arranged in small centers of growth. Obviously, we were dealing with a generalized lymphocytoma, and while the histopathologic picture of the skin did not exactly coincide with that described by Riehl and Arndt, when viewed in the light of the clinical and hematologic findings it established a tentative diagnosis of a true universal lymphadenosis. A second microscopic examination of the skin of the trunk made on Jan. 7, 1920, revealed a similar, although more striking picture. As will be seen from Figure 3, the epidermis showed some hyperkeratosis and acanthosis, with beginning lengthening of the papillae and early diffuse lympho-

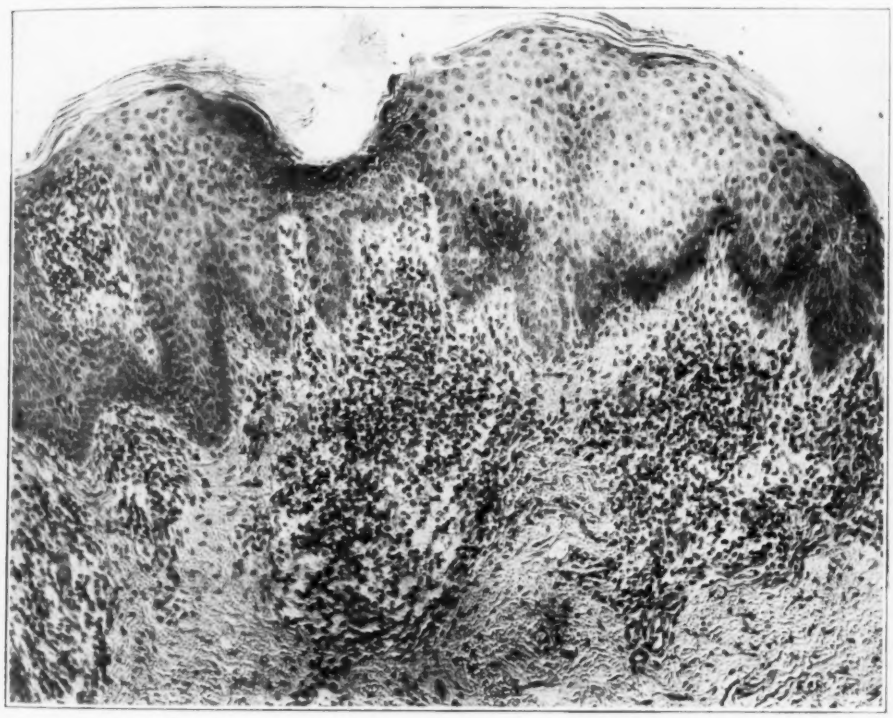

Fig. 3.—A typical lymphoid hyperplasia of the primitive lymph nodes of the papillary layer of the corium.

blastomatous infiltration. The atypical lymphoid hyperplasia of the primitive lymph nodes of the papillary corium is well shown. Apparently, the infiltration of the papillary layer of the corium has its beginning in the primitive lymph nodes. In the hyperplastic lymph node in the center of the lower field, there are many lightly staining lymphoblasts. Several other histologic examinations of the skin were made during the first year that the patient was under observation, each showing a similar microscopic picture with a gradual extension of the lymphocytic infiltrate. A biopsy, performed May 5, 1921, revealed the characteristic lymphoblastic infiltration of the skin, which will be discussed in detail in conjunction with the necropsy findings.

Course and Treatment.—On entrance, the patient was immediately treated with baths, and wet dressings were applied to the hands and feet in an effort to heal the bothersome fissures. A salicylic acid and petrolatum ointment containing a mild antipruritic was applied to the body, face and scalp. Under this regime the symptoms of chilliness and pruritus abated, and the scaling soon became very much less marked. He remained in the hospital about six weeks, and the

Fig. 4.—Universal leukemia cutis. The marked thickening, universal involvement and inguinal adenitis are well shown.

condition of his skin at the time of his discharge can be seen from Figure 4. The universal involvement and leathery texture of the skin should be noted, together with the striking accentuation of the natural folds and lines of cleavage. The discoloration in the print suggests a marked hyperpigmentation or bronzing, but in life the color was brownish red, which to many suggested the appearance

of a boiled lobster. The marked enlargement of the inguinal glands should also be noted in Figure 4.

The patient returned to the hospital in about a month, and with the exception of several short visits to his home, he was under observation continually until the time of his death, four years later.

Local treatment consisted for the most part of baths, wet dressings and various ointments and pastes containing keratolytic and antipruritic drugs. Under this therapy, the scaling remained fine and branny and never returned to the abundant large flakes which were seen at the time of his first examination. The pruritus was likewise relieved, but he was never entirely free from this symptom, which was especially persistent over the face. He frequently complained of spontaneous pain, especially in the legs, a symptom to which Arndt[6] called attention. During the course of his illness, he received arsenic in various forms without any noticeable improvement in his clinical condition or alteration in the blood picture.

Several months after readmission, both the spleen and liver became enlarged so that they were distinctly palpable. This seemingly was a variable factor and not related to roentgen-ray therapy, as for periods of months these two organs could be readily felt at the costal margin, while at other times no maneuver or position seemed to bring them within the palpating fingers.

The leukocytosis varied from 25,000 on March 27, 1920, to 85,000 on Nov. 25, 1923, while the hemoglobin reading was never below 68 per cent. The red blood cells on a great number of counts averaged 3,500,000. In the differential picture, the red cells were usually fairly normal in appearance. Frequently, there was some moderate central pallor. Platelets were invariably diminished. The predominating white cell was a medium-sized lymphocyte with a small amount of fragile cytoplasm, in type about midway between the ordinary large and small lymphocyte of normal blood. There was an absolute, permanent and progressive increase in the percentage of lymphocytes, the maximum occuring on Oct. 25, 1923, when 94.5 per cent. of lymphocytes were counted.

Early in the course of the disease we were able to control the number of young forms in the blood picture with roentgenization of the spleen and tibiae, but later roentgen-ray therapy did not seem to influence the type of white cell present. Repeated roentgen-ray exposures of the skin never produced any striking clinical change, although the pruritus was temporarily relieved. The papillomatous lesions on the extremities were extremely rebellious to treatment. They were not influenced by the roentgen ray and we were able to control their growth only by the use of strong keratolytics. Numerous interesting suggestions were offered by visitors to the clinic, but after a trial of these measures we would invariably have to resort to the salicylic acid plaster. Later in the course of the disease these lesions extended, so that the upper forearms and legs presented a transitional epidermal change, with the atrophy on the proximal side and the marked hypertrophy increasing as the distal phalanges were approached.

The patient's appetite was uniformly good and his weight curve showed little fluctuation. The relatively slight impairment of his general health was a rather striking feature of his long continued illness, a fact which we know characterizes this type of new growth. The enlargement of the superficial lymph glands was slowly progressive and entirely asymptomatic, and showed no tendency to break down until one month before death. At this time, an acute lemon-sized swelling appeared in the right deep posterior cervical chain of lymph glands, which

promptly softened, necessitating deep incision and drainage. A small tea cup full of thick yellowish purulent material was evacuated, following which operation prompt healing occurred.

On two occasions during his hospital stay, the patient developed definite signs of bronchopneumonia, with involvement of the pleura, from which he rapidly recovered. On Jan. 17, 1924, he again developed bronchopneumonia and pleuritis. On January 22, temperature, pulse, and respirations were 103.6 F., 120 and 32, respectively; respiratory embarassment and cough were marked and on the following day respirations ceased.

Necropsy.—There was marked congestion and edema of the meninges of the brain, lymphatic leukemia in the meningeal vessels, congestion, edema and atrophy of the brain substance, with lymphatic leukemia of the vessels.

Congestion, edema and atrophy were present in the spinal cord.

There was marked pigmentation of the posterior lobe of the hypophysis; also marked congestion, increase of basophils and chromophores, excessive colloid in the intermediate lobe and numerous brain sand concretions.

Much brain sand was present in the pineal gland.

Examination of the heart revealed: subepicardial fatty infiltration with serous atrophy, marked atherosclerosis of the coronaries, marked atrophy of the heart muscle and subendocardial fatty degenerative infiltration.

There was advanced atherosclerosis of the aorta.

Examination of the lungs revealed: acute fibrinopurulent pleuritis, acute hemorrhagic purulent locular pneumonia, chronic passive congestion, localized emphysema and some peribronchial infiltrations.

Lymphoblastoma and moderate anthracosis were found in the bronchial nodes. There were numerous islets of thymic tissue with many calcified corpuscles of Hassall. The lymphoid tissue was of the lymphoblastomatous type. There was an old nodular colloid goiter with increase of stroma. The colloid on the whole was reduced. There was no epithelial hypertrophy.

Examination of the sternal marrow revealed an increase of lymphocytes and diminution of myelocytes. There was no lymphoid marrow in the tibia.

There was lymphoblastomatous hyperplasia of the spleen. Figure 5 is a section of spleen showing the relative increase of stroma and leukemic lymphoblastomatous hyperplasia. The picture was typical of lymphatic leukemia.

There was chronic catarrh of the intestines. An old chronic obliterative appendicitis was present.

There was marked atrophy of the stomach and a chronic catarrh. Postmortem change had occurred.

There was a marked nutmeg liver with lymphatic leukemia. Figure 6 is a section of liver showing the characteristic lymphoblastomatous infiltration of the periportal tissue. An increase of lymphocytes in the intralobular capillaries is also shown. There was a typical picture of lymphatic leukemia.

The pancreas showed postmortem change. There was atrophy with an increase of stroma.

The gallbladder showed postmortem change. Otherwise it was negative.

Chronic parenchymatous degenerative nephritis was present, also a secondary contracted kidney and well advanced arteriosclerosis.

There was marked lipoidosis and atrophy of the suprarenals and chronic passive congestion. The zona pigmentosa was markedly pigmented. The seminal vesicles contained no sperm. There was no atrophy. There was postmortem desquamation of the prostate. There was slight chronic cystitis of the bladder. The epididymis was dilated. There was no sperm.

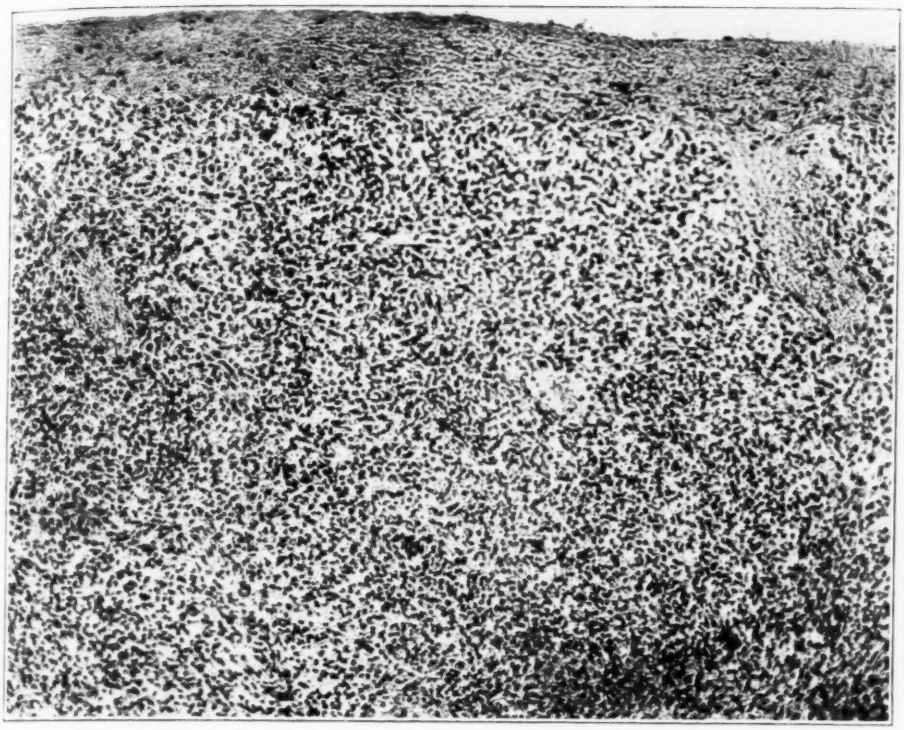

Fig. 5.—Section of spleen showing the relative increase of stroma and leukemic lymphoblastomatous hyperplasia. Typical picture of lymphatic leukemia.

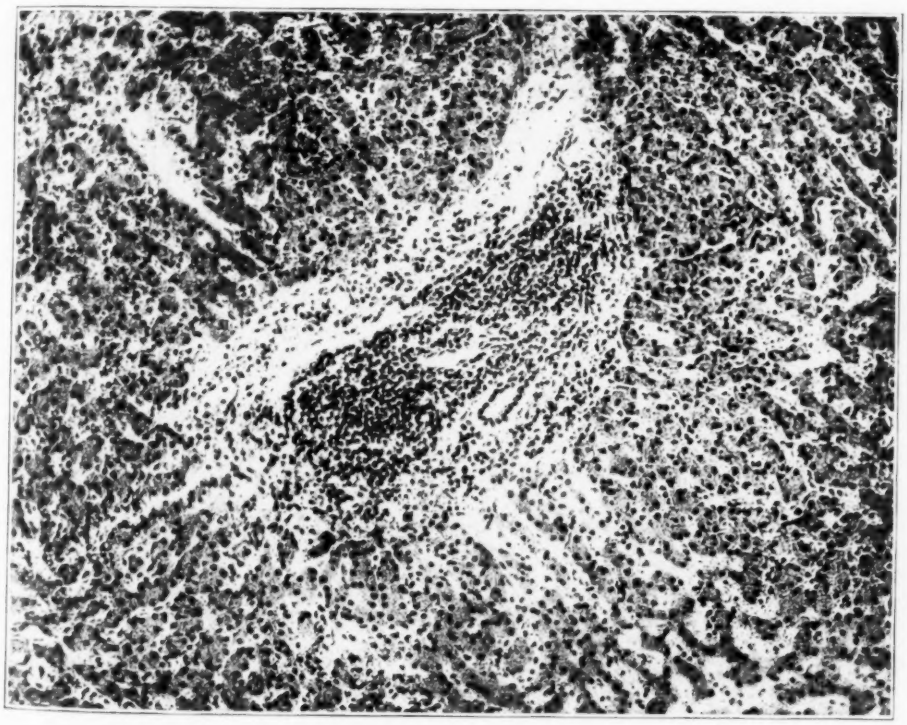

Fig. 6.—Section of liver, showing the characteristic lymphoblastomatous infiltration of the periportal tissue. Typical picture of lymphatic leukemia.

Fig. 7.—Section of skin from thoracic region. Atrophy of epidermis and diffuse lymphoblastomatous infiltration of papillary layer.

Fig. 8.—Section of skin from leg near the condylomatous areas, showing the transition from smooth skin to papillomatous overgrowth, and leukemic lymphoblastomatous infiltration of papillary layer.

There was complete fibrosis of the seminiferous tubules of the testes, with marked hyperplasia and hypertrophy of the interstitial cells, with lipoidosis and pigmentation. All vessels showed lymphatic leukemia, and there were localized lymphatic infiltrations.

The skin showed leukemic lymphoblastoma. Figure 7 depicts a section of the skin from the thoracic region. Atrophy is revealed in the epidermis. The papillary layer showed a diffuse lymphoblastomatous infiltration. Increase of leukocytes in the vessels is also well shown. Figure 8 shows a section of skin from the leg near the condylomatous areas, showing the transition from smooth skin to papillomatous overgrowth. Marked hyperplasia of the epidermis, with

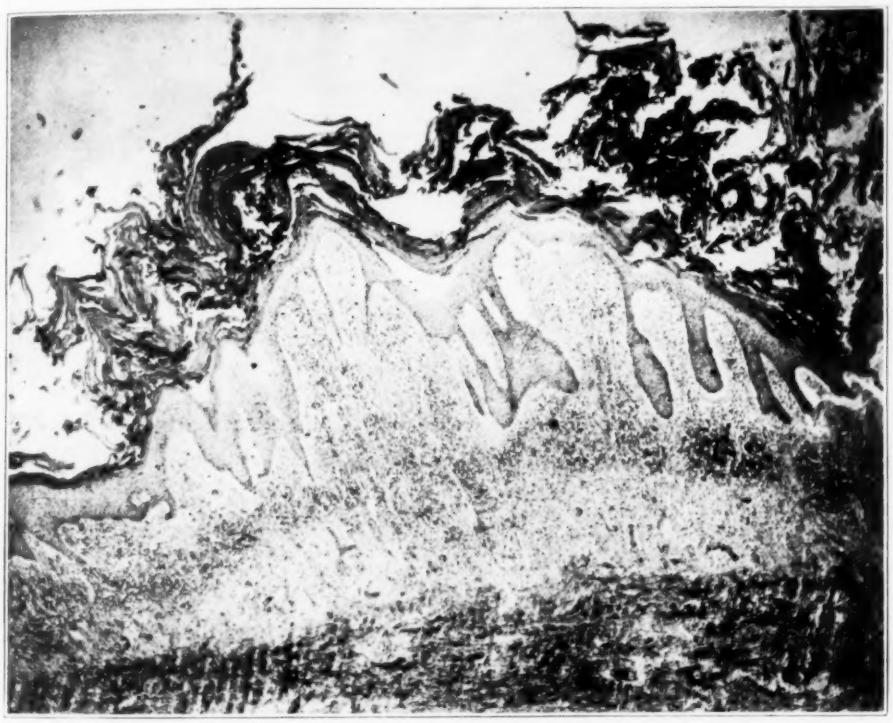

Fig. 9.—Low power view of transition between smooth skin and condylomatous areas on leg. The slight nodular character of the marked infiltration in the papillary layer represents the site of the original primitive lymph nodes.

marked cornification and lengthening of papillae and interpapillary cords, is present. There is leukemic lymphoblastomatous infiltration of papillary layer. Figure 9 is a low power view of the transition between the smooth skin and condylomatous areas on the leg, showing marked hyperkeratosis and papillomatous hyperplasia of the papillary layer. The heavily marked infiltration of the old papillary layer is shown by the dark band, which represents the site of the original primitive lymph nodes. The slight nodular character of this infiltration shows the site of the original nodes. The sharply marked line of demarcation between the papillary layer and the corium is well shown. Fig-

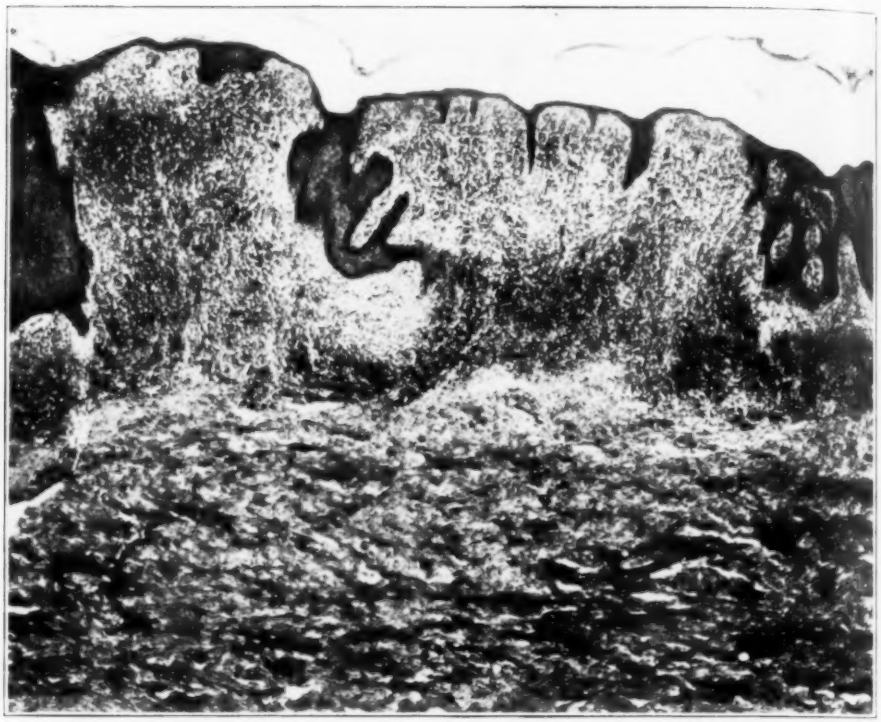

Fig. 10.—Low power magnification of skin from area of thickest infiltration. The line of demarcation between the infiltrated papillary layer and the lower portion of the corium is well shown.

Fig. 11.—High power view of upper part of papillary layer in the condylomatous area.

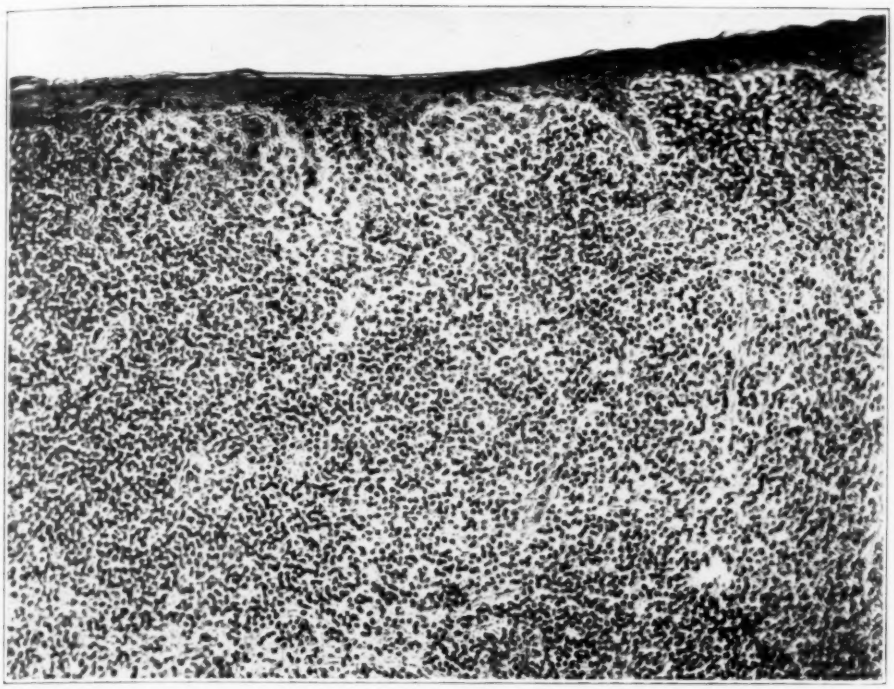

Fig. 12.—Section of leukemic infiltration of skin from lateral aspect of thoracic wall. Marked atrophy and leukemic lymphoblastomatous infiltration of the papillary layer. Note also the absence of hair follicles and gland structures and the striking resemblance to lymphosarcoma.

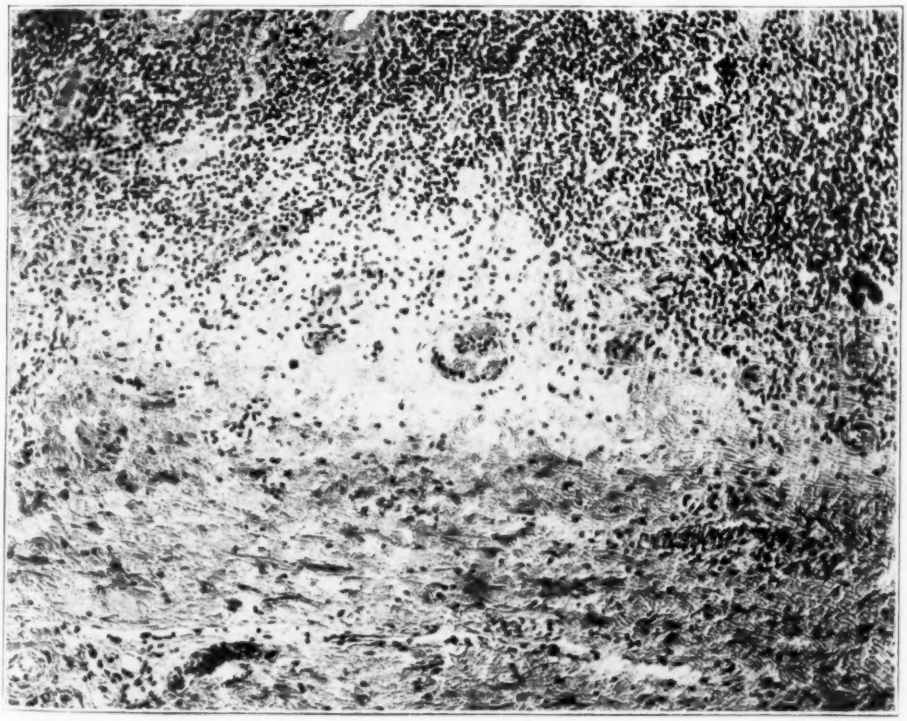

Fig. 13.—Lower part of papillary layer of preceding figure showing sharp line of demarcation of leukemic lymphoblastomatous infiltration. The blood vessels show the picture of lymphatic leukemia.

ure 10 shows a section of skin from the area of thickest infiltration. This is a low power magnification showing localization of infiltration in the hyperplastic papillary layer, with broadening of the papillae and atrophy of the overlying epidermis. The line of demarcation between the infiltrated papillary layer and

Fig. 14.—Gross appearance of enlarged lymph glands in the right inguinal region.

the lower portion of the corium is well shown. Figure 11 is a high power view of the upper part of the papillary layer in the condylomatous area, showing the marked hyperplasia and hyperkeratosis of the epidermis, and the lengthening

and leukemic infiltration of the papillae. Figure 12 shows a section of the leukemic infiltration of skin from the lateral aspect of the thoracic wall. There is marked atrophy of the epidermis. The marked leukemic lymphoblastomatous infiltration of the papillary layer can also be seen. The absence of hair follicles and gland structures and resemblance to lymphosarcoma should also be noted. Figure 13 shows the lower part of the papillary layer in Figure 12, showing the sharp line of demarcation between the leukemic lymphoblastomatous infiltration of the papillary layer and the corium, which shows but slight infiltration. The blood vessels show the picture of lymphatic leukemia.

There was leukemic lymphoblastoma of the lymph nodes. Figure 14 shows the gross appearance of the enlarged lymph glands in the right inguinal region.

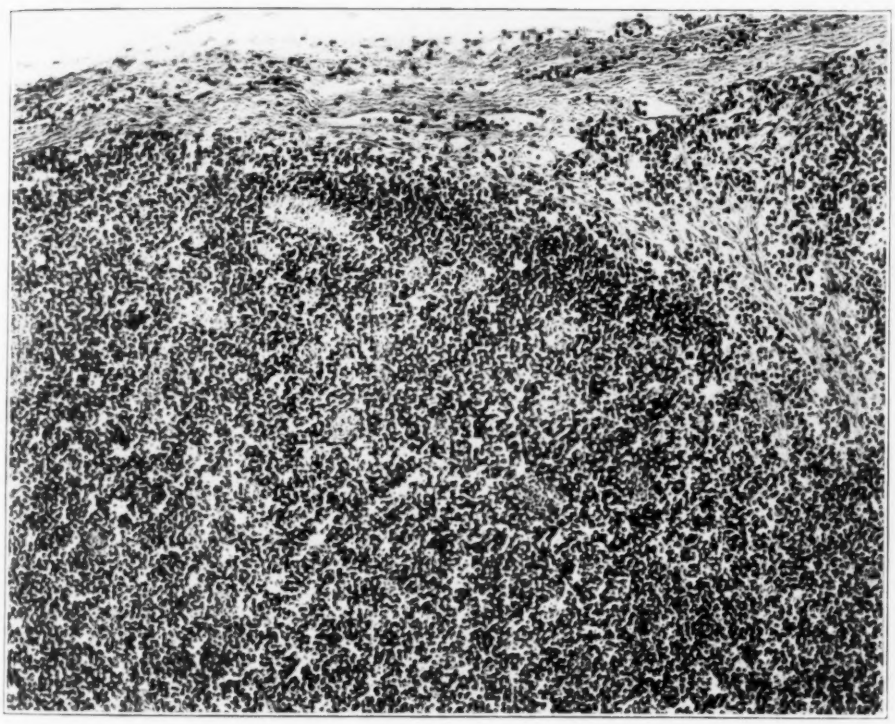

Fig. 15.—Axillary lymph node showing the leukemic lymphoblastomatous transformation of the lymph nodes. Typical picture of lymphatic leukemia.

Figure 15 portrays an axillary lymph node, showing the leukemic lymphoblastomatous (lymphosarcomatous) transformation of the lymph nodes. Throughout the atypical lymphoid tissue are many lightly staining lymphoblasts. This is a typical picture of lymphatic leukemia.

A subcutaneous nodule gave evidence of a hard fibroma with more cellular areas—a fibrosarcoma.

The blood vessels showed a condition of lymphatic leukemia and contained leukemic clots.

Pathologic Diagnosis.—The diagnosis was: lymphatic leukemia, leukemic lymphoblastoma of the skin, spleen, lymph nodes, bone marrow and liver

(leukemia cutis); terminal lobular pneumonia; acute fibrinopurulent pleuritis; right-sided empyema; cardiac dilatation with relative tricuspid and pulmonary insufficiency; subepicardial fatty infiltration with serous atrophy; atrophy and fatty degenerative infiltration of the myocardium; advanced atherosclerosis of the aorta and coronary arteries; chronic parenchymatous degenerative nephritis; secondary contracted kidney with arteriosclerosis; nutmeg liver; passive congestion, atrophy and parenchymatous degeneration of all organs; lipoidosis of the suprarenals; roentgen-ray fibrosis of the testes, with hypertrophy of the interstitial cells; cysts of the epididymis and subcutaneous fibrosarcoma.

CLASSIFICATION AND ETIOLOGY

An extensive literature has accumulated on the classification and interpretation of the diseases of lymphatic origin. A brief discussion of this question would seem permissible in an attempt to simplify this classification rather than to complicate it, thereby detracting from, rather than adding to, the confusion that obviously exists.

Within several weeks of the necropsy described, a typical case of mycosis fungoides, from the department of dermatology and syphilology, came to postmortem examination. While clinically the case under discussion at no time during its course suggested mycosis fungoides, the tissues predominantly involved anatomically were almost similar in the two cases. The lymphoid tissues and skin in both cases seemed to have borne the brunt of the attack. In addition, the neoplastic growth of the mycosis fungoides had invaded the kidneys, pancreas, testes and gastrointestinal tract. However, the histologic alterations in the involved tissues consisted essentially of a hyperplasia of the lymphoid elements, the primary difference being in the type of cell predominating. In the case of mycosis fungoides, the cell was a large round lymphosarcoma type of cell, the plasma cell type being present in such preponderant numbers that it might be called a plasmoma. In the case of the true cutaneous lymphadenosis, the predominating cell was the small lymphatic type. During the past few years, we have followed two other cases of mycosis fungoides to necropsy, and the pathologic picture in both was essentially the same as that described above. The predominating type of cell in both of these cases, however, was the small round lymphosarcoma cell. The striking involvement of the skin in mycosis fungoides and certain cases of leukemia, together with the similar pathologic picture, has led numerous observers to regard mycosis fungoides as an aleukemic form of leukemia.

Within the past year, still another case with a cutaneous picture came to postmortem examination from our department which clinically was readily distinguished from universal leukemia cutis and the typical mycosis fungoides. This patient had consulted Dr. Nevens Hyde in 1903, and at that time presented "symmetrical involvement of axillae and groins with reddened, scaling, slightly thickened areas, without

pruritus." The condition had been progressive since that time. At the time of examination, the patient presented a practically universally distributed eruption. The picture was that of an extensive atrophoderma with some parakeratosis and pigmentary changes, looking not unlike an extensive chronic radiodermatitis or a poikiloderma atrophicans vasculare.

There was an associated general adenitis, the glands being the size of large cherries, and in the left axilla were three discharging sinuses. Necropsy revealed a large round cell lymphosarcoma of the regional lymph nodes, most marked in the left axillary region, involving all the lymphoid tissues of the body with the exception of the gastro-intestinal tract and liver. This was associated with a diffuse endotheliolymphocyte infiltration of the skin and mucous membranes. Here also we see a similar predisposition for the lymphoid structures, the difference occurring in the type of cell which predominated.

In the same manner, cases of Hodgkin's disease are attended by cutaneous manifestations—pruritus, pigmentation and localized infiltrations being the ones most frequently observed. Here again we are dealing with a systemic disease, primarily of the hemopoietic system, which involves the lymphoid tissue by choice and gives rise to multiple foci of growth, as in the examples mentioned above.

It has recently been my privilege to see, in the department of pathology, a section of a deep-seated cutaneous localized infiltration from a patient, aged 47, with numerous nodular cutaneous infiltrations of four years' duration. The blood picture in no way suggested leukemia, and the tumors were entirely asymptomatic. Roentgen-ray therapy is being used in an effort to reduce the size of the nodules. Microscopically, the picture was that of "Hodgkin's disease with atypical lymphocytes, lymphoblasts, esoinophils, myelocytes, and reticulo-endothelial giant cells in the primitive lymph nodes. It was very cellular and under the roentgen-ray treatment might develop into either leukemia or mycosis fungoides. It suggests the rare form of primary cutaneous Hodgkin's disease. The picture further suggests that similar changes could be found in the larger lymph nodes and that ultimately all the lymph nodes, spleen and bone marrow will show the same change."

It would seem from the histologic study of these four clinically divergent cutaneous manifestations that we are dealing with four pathologic processes which are genetically related. Each seems to present histologic changes in the lymphoid structures, following an insult to the hemopoietic system. This results in a systemic process with multiple foci arising at different parts of the body at relatively the same time with or without clinical involvement of the skin. That the skin can be involved without clinical manifestations was demonstrated by a

recent necropsy of a case of chronic lymphatic leukemia with leukemic infiltrates of the skin of the face. In addition to this clinical finding, he presented definite histologic involvement of the apparently uninvolved skin, which is suggestive of the fact that if the patient had not succumbed to his neoplasm, new leukemic infiltrates would no doubt have occurred, and possibly if life had continued sufficiently long a universal cutaneous involvement might have taken place.

Etiologically, many attempts have been made to prove the infectious nature of the diseases of lymphatic origin, but this hypothesis has not been generally accepted. Rather, in the light of our present knowledge, must we regard these conditions as neoplastic in nature, the primary insult, whether bacterial or chemical, remaining unknown. Following the primary change in the hemopoietic system, multiple foci of growth occur at approximately the same time, in contradistinction to the usual malignant extension from a primary focus. Clinically, the diseases of lymphatic origin present an additional divergence in the absence of the rapidly progressive cachexia which is invariably associated with the true neoplastic growth. On the other hand, they simulate true malignancy in their fatal termination.

If we can regard these lymphocytomas as true tumors which present essentially the same histologic features, differing only in the type of cell which predominates, might it not be permissible to classify these conditions under the term "lymphoblastoma"? The cutaneous pictures then associated with each type must be regarded as the various expressions of the lymphoblastomas rather than separate clinical entities. In this classification, may also be included several unusual transitional forms, such as Stenburg's leukosarcoma and Kaposi's lymphadenoma perniciosa.

CONCLUSIONS

1. A case of universal leukemia cutis is presented, with clinical, histopathologic and hematologic evidence of lymphatic leukemia.

2. From a study of this patient and other cases of leukemia, mycosis fungoides, lymphosarcoma and Hodgkin's disease, it would seem that these diseases are genetically related pathologically, and may be grouped under the head of the "lymphoblastoma." If such a classification is justifiable, then the cutaneous pictures associated with these diseases must be regarded as the variable cutaneous expressions of the "lymphoblastomas."

DISCUSSION

DR. MARTIN F. ENGMAN: One of my associates, Dr. McIntosh, and I have been studying about twenty cases of mycosis fungoides and ten or twelve cases of leukemia. In the course of this study, we have made some rather interesting observations which I think may throw some light on the whole question. In the first place, we should orient ourselves to the fact that leukemia of different

types may start from prolonged irritation in any part of the body. It may start in an area of the skin and produce localized leukemia, and it may start in certain areas and give us a picture similar to that of mycosis fungoides. However, from our study, we differ from the conclusion of Dr. Keim that mycosis fungoides is not a definite entity, on account of the definite type of cells and the clinical picture from the very beginning. I think Arndt has led us astray from the proper conception of leukemia cutis. In the study of these cases, I think we must orient ourselves to a fundamental factor of malignancy, i. e., that prolonged irritation of the skin may produce leukemia. Carcinoma may be produced by prolonged irritation around an ulcer—epithelial malignancy. The same result may occur in other types of the tissue. Until this observation came to us, we would see the various histologic and clinical pictures in the study of these various types of cases of general exfoliative dermatitis. I think we can make the observation, and confirm it later by certain studies, that dermatitis exfoliativa existing for a number of years may produce such pictures as Dr. Keim has shown. We must orient ourselves to the fact that the prolonged irritation from psoriasis, or various other clinical forms of irritation, may become a general exfoliativa of the Wilson type, and in the final years stimulate the lymphocytic areas into a malignant proliferation. Therefore, leukemia in such cases has presented a progressive process step by step. It may be arrested in the early stage, or may go on into the malignant type of lymphatic leukemia.

Dr. Walter J. Highman: I was gratified at Dr. Keim's stand, for the literature on this subject reflects confusion. I think the Europeans, with special reference to the Teutonic school, have had a clearer conception of the matter than we. Dr. Frank Fraser of New York, who read a paper on this topic before this section in 1916, first pointed out over here the likelihood of the pseudoleukemic process and mycosis fungoides being related. Dr. Arndt had two years prior to that, as Dr. Keim said, read his paper on leukemia and more or less arrogated to himself the credit for the term leukemids, the credit for which I believe belongs to Audry (?) of France. He defined the leukemids as eruptions which might occur preceding leukemia and in those not developing leukemia, believing that they were generic and had no reference to leukemia. The nature of the true leukemic eruptions is obvious. Whether this conception of leukemids is correct or not, I do not know. It could only be proved in retrospect, in a leukemic person who had had toxic eruptions early in the course of the disease. There is more to this analysis than its flippancy would indicate. I believe that leukemids, in the sense of Audry and Arndt, have a direct connection with the general process.

In this country, we have thought that we could detect in the premycotic process some histologic harbinger of the disease that was to develop. I do not believe this is true. I do not think these diseases in either stage can always so be recognized. If there is an analogy between mycosis fungoides and leukemia, then I believe we may have analogous nondescript eruptions in the former, and I believe the corroboration of this will come in the future. For this reason I am not inclined to agree with Dr. Engman. I think the success or failure of being able to prove the diagnosis of mycosis fungoides under the microscope depends entirely on what lesion is selected for study. Some lesions show what we call the typical picture and others do not, and frequently in examining specimens from a mycotic patient we will see the typical picture in one section, in another section a picture that looks like leukemia cutis, and in still another a picture that is not like either. I think the diagnosis in every case depends on a careful clinical study.

DR. HARTHER L. KEIM: I am inclined to agree with Dr. Highman rather than with Dr. Engman. My experience with mycosis fungoides, of course, has not been as extensive as that of Dr. Engman, but during the past four or five years we have been able to follow to necropsy four cases of mycosis fungoides, and each case was pathologically a lymphoblastoma. They did differ, however, in the type of cell which predominated.

I was glad to hear Dr. Highman refer to the leukemids as premycotic infiltrations. I was tempted to call attention to this interpretation of the term leukemid, but felt that to do so might result in some confusion.

THE WASSERMANN TEST

XII. THE EFFECT OF INTRAMUSCULAR INJECTION OF NEO-ARSPHENAMIN ON THE WASSERMANN REACTION *

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AND
ROY HERBERT HOLMES, M.D.
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This paper deals with the results of neo-arsphenamin used intramuscularly. It is the third of a series of papers that discuss the effect of certain antisyphilitic remedies on the Wassermann reaction. A freshly prepared 3 to 6 per cent. solution of neo-arsphenamin (Metz), p_H value about 7.4, was injected into the gluteal muscles according to the Rosen-Fordyce technic, which proved especially satisfactory in the younger children, whose activity was difficult to control. A uniform dose of 0.0132 mg. per kilogram of body weight, equivalent to the maximum dose of 0.9 mg. for a 68 kg. patient, was administered in a course of six injections over a period of five weeks. The strength of the Wassermann reaction was measured as described in a previous paper,[1] before treatment, at the third week and at one and four weeks

TABLE 1.—*Case Histories*

	Cases									
	1	2	3	4	5	6	7	8	9	10
Age in years	9.2	5	7	5	7	4.5	5	3.7	1.2	2.5
Nutrition (normal standard 100 per cent.)	86	91	106	100	98	92	100	82	73	100
Physical Examination:										
Eyes, "snuff" fundi	..	+	+	..	..	..	..	+	..	..
"Saddle nose"	..	+	..	..	..	+	..	..	..	..
Hutchinsonian teeth	+	..	+	..	..	..	..	..	..	..
Carious teeth	..	+	..	+	..	..	..	..	..	..
Glands, enlarged	+	+	+	+	+	+	..	+	+	+
Heart, irregular	+	..	..	..	+	+	..	..	..	..
Heart, enlarged	+	+	+	..	..	+	..	..	..	..
Spleen and liver, enlarged	..	..	..	..	..	..	..	+	+	..
Gumma, lip	..	..	..	..	..	..	..	..	..	+
Condylomas, anus	..	..	..	..	..	..	..	..	..	+
Lack of nervous control	..	+	+	+	+	..	..	..	..	..
Detection of Syphilis:										
Age in years	7	0.1	4	4	6	2.5	2	2	0.25	0.25
Through mother	+	+	+	+	+	+	+	+	+	..
Previous Symptoms:										
Skin lesions	..	+	+	..	..	..	..	+	+	..
Snuffles	..	+	..	..	..	..	..	..	..	+
Eyes	..	..	..	..	..	+	..	..	..	+
Previous Treatment:										
Arsphenamin, grams	4.5	13.6	6.7	..	..	..	9.0	..	1.0	1.3
Mercury, grains	6	2.8	8	5.8	3	..	29	3	2.5	..
Mercury by mouth or inunction	..	..	..	..	..	+	+	+	..	+
Weeks since previous treatment	9	17	4	0.5	2	44	12	17	17	35

* From the Evans Memorial and Boston University School of Medicine.

1. Belding, D. L., and Holmes, R. H.: The Wassermann Test. XI. The Effect of Mercurosal on the Wassermann Reaction, Arch. Dermat. & Syph. 9:459 (April) 1924.

after the last injection. Additional tests were taken in certain patients at eight, twelve and sixteen weeks after treatment. Ten children ranging in age from 15 months to 9 years were selected for treatment because of strongly positive reactions, in spite of some previous treatment. With the exception of one child, they showed no active lesions of syphilis, and beyond certain stigmas appeared to be in moderate health. Table 1 gives a condensed case history of each patient.

ADMINISTRATION

The intramuscular administration of neo-arsphenamin has received the attention of many investigators and has called forth both praise and condemnation. In our sixty injections, there occurred nine instances of moderately severe pain, five noticeable and two severe indurations and one sterile abscess, which healed in six weeks. Frequently, the pain rendered the child restless during the first night because of inability to lie on the side into which the injection had been made. Certain persons appeared to be more sensitive than others in regard to pain and induration. Practically all the uncomfortable local symptoms followed the first, third and fourth injections, which suggests a difference in the preparation and administration of the neo-arphenamin on those days, although the same technic was invariably followed. Possibly certain of the unfavorable local effects noted by us may be attributed to the use of arsphenamin not specified for intramuscular injection. It is our opinion that although intramuscular administration can be tolerated, yet, owing to occasional difficulties, it should be used only when intravenous administration is impracticable.

Four children suffered from nausea and vomiting, three from restlessness and irritability, and two were indisposed for a week. No other toxic effects were noted. Anaphylactoid reactions seem less apt to occur with intramuscular than with intravenous injections. Children tolerate proportionally larger doses of neo-arsphenamin than adults without evidencing toxic symptoms. In Case 10, the only patient with external syphilitic lesions, a gumma of the lip and anal condylomas had practically disappeared after the third injection. No particular change in the general condition of the other patients was noted.

WASSERMANN REACTION

The strength of the Wassermann reaction varies with the duration of the disease, the extent of the syphilitic process, the reaction of the patient and the treatment. The statistics of Craig [2] indicate that a

2. Craig, C. F.: The Wassermann Test, St. Louis, The C. V. Mosby Co., 1921, p. 159.

positive reaction is obtained in 89.8 per cent. in late primary syphilis, 96.1 per cent. in secondary, 87.4 per cent. in tertiary, 68.1 per cent. in latent and 82.1 per cent. in congenital. These figures are based on the commonly accepted 0.2 c.c. of patient's serum for a 5 c.c. volume test, which places an arbitrary dividing line between negative and positive. Actually, the Wassermann antibody cannot thus be designated as present or absent. In hundreds of so-called negative cases we have been able to demonstrate a positive reaction by using two and four times the amount of serum, and such cases may be as truly syphilitic as those which give a positive with the standard amount of serum.

The percentage of positive reactions given above for the different stages of syphilis merely indicates that in a certain number of cases the amount of Wassermann antibody is not sufficient for detection by the ordinary method. Serums which contain a borderline quantity are most readily affected by the variations in the test due to the type, quality and quantity of the antigens and to the fluctuating complement unit. Under such conditions, it is not uncommon to get all manner of results, from a negative to a strong positive, with a single serum in repeated tests in the same laboratory or in different laboratories.

It is unfortunate that so little quantitative data for the Wassermann test are at hand. The titrated serum probably does not give an absolutely correct representation of the strength of the Wassermann reaction, for the factors entering into this relation are too complex and the variables too numerous. The variations from the mutual optima of antigen and serum doses, the vehicle of serum dilution, the daily variation in the hemolytic and fixing unit of the complement and the amount of Wassermann antibody in the serum produced peculiar and at times surprising results. Measuring the strength of the reaction by increasing units of complement is a more accurate method, but for routine examination of large numbers, titration of the serum is the most practical method at our present command.

According to the arbitrary standard of measurement used in this paper, based on 4 units for complete inhibition in 0.2 c.c. of the original Wassermann serum volume, the strength of positive serums will ordinarily range between 1 and 256 units. The duration of the disease and the response of the individual causes considerable variation. As a rule, most serums fall between 4 and 64 units, averaging from 8 to 16. The reaction in untreated congenital syphilis is fairly strong, averaging between 16 and 32 units. With 16 units it is practically impossible to obtain a negative by the daily variations in the test, a condition which not infrequently occurs in 4 and rarely in 8 unit serums. In our experience, the proportion of positive tests in untreated syphilitic chil-

dren under 10 years of age is greater than Craig's figures, and congenital syphilis gives a correspondingly higher percentage of positives than old acquired syphilis.

INFLUENCE OF INTRAMUSCULAR NEO-ARSPHENAMIN

It is the consensus of opinion that neo-arsphenamin, particularly when followed by mercury, permanently reduces the Wassermann reaction. Goodman [3] reports that the Wassermann test fourteen days after treatment became negative in 44 per cent. of forty-three Porto Rican prostitutes, free from active lesions, who received intensive intravenous treatment with three injections of neo-arsphenamin. Findlay [4] found that 64 per cent. of children gave a negative reaction after a course of nine injections of neo-arsphenamin.

In our series of six intramuscular injections (Table 2), a weekly rate of 0.0158 gm. per kilogram of body weight over a period of five

TABLE 2.—*Neo-arsphenamin and the Reduction of the Wassermann Reaction*

	Weeks after Start of Treatment	Strength of Reaction in Percentage		
		10 Cases	7 Cases	3 Cases
Before treatment	0	100	100	100
After 3 injections	3	70	79	50
After 6 injections:				
1 week	6	41	45	33
4 weeks	9	41	45	33
8 weeks	13	..	..	33
12 weeks	17	..	..	33
16 weeks	21	..	..	33

weeks appreciably lowered the Wassermann reaction, although only one patient, who had a low initial strength, attained a negative reaction. The results are expressed in terms of per cent., 100 representing the average strength of the reaction before treatment. Four weeks after treatment, seven patients received further treatment, while three, who were given no other treatment, served as a control. For this reason, the results have been expressed in three groups.

CLINICAL SYPHILIS

In Table 3, the strength of the reaction before treatment in children who showed stigmas or symptoms of congenital syphilis, past or present, was twice that in the clinically latent cases which showed only slightly enlarged glands or a lack of nervous control. This difference in initial reaction, although rendering the production of a negative more difficult, theoretically should have no influence on the reduction

3. Goodman, H.: Am. J. Syph. **3**:661, 1919.
4. Findlay, L.: Proc. Roy. Soc. Med. **14**:55, 1920-1921.

of the strength of the reaction. Practically, patients with clinical symptoms responded more slowly to treatment. The same thing was noted in patients with stigmas of congenital syphilis.

TABLE 3.—*Factors Influencing the Reduction of the Wassermann Reaction*

	Number of Cases	Wassermann Unit Value before Treatment	Percentage of Initial Reaction Weeks after Start of Treatment			
			0	3	6	9
No symptoms	3	28	100	50	33	33
Symptoms	7	55	100	79	41	46
No stigmas	5	35	100	60	33	35
Stigmas	5	61	100	80	43	48
Nutrition above normal	5	33	100	50	30	30
Nutrition below normal	5	61	100	90	48	43
Previous Treatment:						
Thorough	4	29	100	75	50	50
Little	6	59	100	67	36	36
Present Age:						
Over 5 years	6	35	100	67	48	48
Under 5 years	4	68	100	75	35	35

NUTRITION

Five children were below the standard for normal children, five at or above. The former averaged 85 per cent., the latter 101. The strength of the reaction before treatment in the children with normal development averaged 33 units as compared with 61 for the subnormal. The normal children responded more readily to treatment, although this result may have been influenced by the fact that three showed no clinical symptoms.

AGE

The children under 5 years of age gave a stronger initial reaction than the children above that age. Children who were under 2 years of age when the first diagnosis was made gave a stronger reaction than those over 2 years of age, 57 as against 32 units, which suggests that the strength of the reaction varies with the period of development of congenital syphilis. Response to treatment was more marked in the younger children with the stronger reactions.

PREVIOUS TREATMENT

Children who had received little or no treatment gave a stronger reaction, 59 units, than those who had received considerable arsphenamin and mercury, 29 units, the lowest figures being found in the children who had received thorough mercury treatment. The response to treatment with neo-arsphenamin was more pronounced in the children who had received little or no previous medication. The treated group includes children with and without symptoms, and the failure to respond to treatment cannot be attributed to the presence of clinical syphilis.

SUMMARY

1. The strength of the Wassermann reaction in congenital syphilis, as a rule, is greater than in acquired syphilis of the same duration. Apparently, it is stronger in early than in late congenital syphilis.

2. Children with clinical evidence of syphilis have a stronger reaction than children with only serum-positive syphilis.

3. Children who have received treatment have weaker reactions than the untreated children.

4. Intramuscular injections of neo-arsphenamin appreciably lower the strength of the reaction, at least for sixteen weeks, the period of observation in our cases.

5. Children who give past or present clinical evidence of syphilis and resultant malnutrition respond less readily to treatment than those in whom the disease is latent.

6. Untreated or slightly treated children respond more readily to treatment than those who have received thorough previous treatment, suggesting the development of a treatment-fast condition.

THE RELATION OF SILVER ARSPHENAMIN TO THE INVOLUNTARY NERVOUS SYSTEM AND TO THE SO-CALLED NITRITOID CRISIS *

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NEW YORK

Previous investigations [1] on the biologic reaction of the body to intravenous injections of arsphenamin led to the observation that a decrease in the number of leukocytes in the peripheric vessels immediately follows such injections. It was further determined that this decrease is based on the reflex action of the autonomic nervous system; the relation of the latter to the white blood corpuscles and to the decrease in their number will be discussed in a later paper.

It has further been shown that during a nitritoid crisis a decrease in the number of leukocytes is evident. This manifestation usually follows closely on the first decrease, exceeding it, however, in intensity. It was finally determined that the administration of epinephrin would inhibit a decrease in the number of leukocytes. The conclusion was therefore reached, first, that this change in their number constituted an objective symptom and at the same time a measurable factor of the nitritoid crisis following the injection of arsphenamin, and second, that it was due to a reaction of the involuntary nervous system and thus to a preexisting disposition in this system. It was not possible to ascertain whether this change, representing, as it does, a manifestation of hypersensitiveness, is due to a constitutional factor or to the injuries resulting from syphilitic infection.

Before proceeding to ascertain the answer to these questions, it was important to study the reactions following other arsenical preparations, in view of the different rôle played by the various preparations in the nitritoid crisis.

Our first studies along these lines were made with patients receiving silver arsphenamin treatment. Practical experience has demonstrated that the majority of persons subject to the so-called nitritoid crisis after the administration of arsphenamin do not react in this manner to silver arsphenamin. These investigations were conducted in a manner similar to those with arsphenamin, and were first restricted only to leukocyte

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1. Rosen, I.; Müller, E. F.; Myers, C. N.: Arch. Dermat. & Syph.

findings. Leukocyte counts were made twice during the course of the injection; once at the beginning and again two minutes later, the entire injection period generally lasting from three to five minutes. During the first half hour following the injection, repeated counts were made at intervals of from five to ten minutes.

It should be noted that the changes in the leukocyte count which are the subject of this study refer only to the peripheric vessels and to the variations immediately following injection. Typical leukocytosis after intravenous injection has been the subject of extensive investigations, and being the result of an increased rate of production of such cells in the bone marrow, is a separate topic, irrelevant to our studies; therefore, in order to avoid any possible confusion, this overproduction, beginning at a later period and representing different biologic reactions of the body to arsphenamin, will not be referred to in this article.

The method employed in the administration of silver arsphenamin was as follows: Silver arsphenamin (0.25 gm.) was lightly sprinkled on the surface of cool, sterile, freshly distilled water contained in a flask which had been previously sterilized. The powder spread over the surface going into solution fairly rapidly. (If the temperature of the water is 20 to 22 C. [68 to 71 F.], solution is soon complete, no shaking being necessary.) Enough sterile, cool, 4 per cent. saline solution is added to bring the volume to 30 c.c. for each decigram of the drug in solution. Eighty cubic centimeters of the solution were employed to conform to the usual method in the other preparations, thus making additional controls needless. The drug was freshly prepared for every patient immediately before administration.

EFFECT OF SILVER ARSPHENAMIN ON PATIENTS TOLERATING OR NOT RECEIVING ARSPHENAMIN

The first series of cases was taken at random from among those patients who had either received no previous treatment or if they had received arsphenamin, it had been tolerated without any reaction attributable to the angioneurotic complex. (The cases are numbered consecutively, to facilitate later comparisons; numbers 1 to 44 were reported in our first communication.)

Number of Leukocytes After Injection of Silver Arsphenamin

CASE 45.—B. R., a woman, aged 23. Three previous injections of arsphenamin.

8,800	Silver Arsphenamin Injection
12,200	½ minute after beginning treatment
10,200	3 minutes after beginning treatment
9,200	10 minutes after beginning treatment
8,800	20 minutes after beginning treatment
8,000	30 minutes after beginning treatment
7,200	40 minutes after beginning treatment

CASE 46.—M. R., a man, aged 50. Two previous injections of arsphenamin.

10,800		
	Silver Arsphenamin Injection	
10,800	½	minute after beginning treatment
9,000	3½	minutes after beginning treatment
10,400	10	minutes after beginning treatment
10,200	20	minutes after beginning treatment
11,200	30	minutes after beginning treatment
11,200	40	minutes after beginning treatment

CASE 47.—T. N., a man, aged 40. Four previous injections of arsphenamin.

14,200		
	Silver Arsphenamin Injection	
12,800	½	minute after beginning treatment
14,200	3	minutes after beginning treatment
15,200	5	minutes after beginning treatment
12,800	10	minutes after beginning treatment
14,200	20	minutes after beginning treatment
13,600	30	minutes after beginning treatment

CASE 48.—A. H., a man, aged 23. Four previous injections of arsphenamin.

13,600		
	Silver Arsphenamin Injection	
14,200	½	minute after beginning treatment
15,000	2	minutes after beginning treatment
14,000	10	minutes after beginning treatment
14,600	20	minutes after beginning treatment
14,200	30	minutes after beginning treatment.

CASE 49.—M. D., a man, aged 54. Two previous injections of arsphenamin.

12,000		
	Silver Arsphenamin Injection	
12,800	1	minute after beginning treatment
11,200	3	minutes after beginning treatment
10,800	10	minutes after beginning treatment
12,800	20	minutes after beginning treatment
14,200	30	minutes after beginning treatment
13,800	40	minutes after beginning treatment

CASE 50.—M. K., a man, aged 22. Three previous injections of arsphenamin.

8,400		
	Silver Arsphenamin Injection	
7,200	½	minute after beginning treatment
8,400	3	minutes after beginning treatment
8,800	5	minutes after beginning treatment
8,200	10	minutes after beginning treatment
8,400	20	minutes after beginning treatment
8,200	30	minutes after beginning treatment

CASE 51.—M. D., a man, aged 54. One previous injection of arsphenamin.

7,200		
	Silver Arsphenamin Injection	
12,000	½	minute after beginning treatment
10,200	3	minutes after beginning treatment
8,200	10	minutes after beginning treatment
7,800	20	minutes after beginning treatment
8,600	30	minutes after beginning treatment
8,200	40	minutes after beginning treatment

CASE 52.—C. L., a woman, aged 20. Four previous injections of arsphenamin.

8,000		
	Silver Arsphenamin Injection	
12,200	½	minute after beginning treatment
12,200	4	minutes after beginning treatment
12,000	10	minutes after beginning treatment
10,800	20	minutes after beginning treatment
10,000	25	minutes after beginning treatment
10,200	30	minutes after beginning treatment
10,800	40	minutes after beginning treatment

Case 53.—G. S., a man, aged 21. Five previous injections of arsphenamin.

15,800		
16,200	(Control)	
	Silver Arsphenamin Injection	
14,800	½	minute after beginning treatment
15,200	4	minutes after beginning treatment
15,400	15	minutes after beginning treatment
16,200	25	minutes after beginning treatment
16,200	35	minutes after beginning treatment
14,800	45	minutes after beginning treatment

Case 54.—L. F., a woman, aged 38. Six previous injections of arsphenamin.

6,800		
6,200	(Control)	
	Silver Arsphenamin Injection	
8,000	½	minute after beginning treatment
8,200	1	minute after beginning treatment
8,000	2	minutes after beginning treatment
8,600	10	minutes after beginning treatment
8,200	20	minutes after beginning treatment
7,800	30	minutes after beginning treatment

Case 55.—E. J., a woman, aged 26. Ten previous arsphenamin injections.

14,400		
	Silver Arsphenamin Injection	
14,200	½	minute after beginning treatment
13,800	4	minutes after beginning treatment
12,000	10	minutes after beginning treatment
10,800	15	minutes after beginning treatment
10,600	25	minutes after beginning treatment
11,800	35	minutes after beginning treatment
12,800	45	minutes after beginning treatment
12,200	55	minutes after beginning treatment

Case 56.—G. N., a youth, aged 18. Five previous arsphenamin injections.

10,600		
	Silver arsphenamin injection	
11,200	½	minute after beginning treatment
11,600	2½	minutes after beginning treatment
12,600	5	minutes after beginning treatment
12,200	10	minutes after beginning treatment
11,800	20	minutes after beginning treatment
11,800	30	minutes after beginning treatment

Case 57.—M. W., a man, aged 20. Five previous arsphenamin injections.

7,800		
	Silver arsphenamin injection	
9,200	½	minute after beginning treatment
10,800	2	minutes after beginning treatment
9,800	10	minutes after beginning treatment
10,200	15	minutes after beginning treatment
10,800	25	minutes after beginning treatment
11,000	35	minutes after beginning treatment

A nonspecific milk preparation, intracutaneous injection in two wheals

10,000	40	minutes after beginning treatment
7,600	50	minutes after beginning treatment
7,200	55	minutes after beginning treatment
9,200	60	minutes after beginning treatment

Case 58.—R. L., a man, aged 24. Two previous arsphenamin injections.

12,000		
	Silver arsphenamin injection	
11,400	1	minute after beginning treatment
11,200	2	minutes after beginning treatment
11,200	5	minutes after beginning treatment
11,800	10	minutes after beginning treatment

A nonspecific milk preparation, intracutaneous injection in two wheals

8,800	15	minutes after beginning treatment
8,800	20	minutes after beginning treatment
7,600	25	minutes after beginning treatment
8,800	30	minutes after beginning treatment
10,200	40	minutes after beginning treatment
10,800	50	minutes after beginning treatment

CASE 59 (see Case 58).—R. L., a man, aged 24. Two previous arsphenamin, one previous silver arsphenamin injections.

10,800

Silver arsphenamin injection

9,600	1½	minutes after beginning treatment
10,400	5	minutes after beginning treatment
9,800	15	minutes after beginning treatment
10,200	25	minutes after beginning treatment
10,400	35	minutes after beginning treatment

A short summary of these cases and a comparison with former investigations of changes in the blood picture immediately following the administration of arsphenamin led to the observation that the acute fall in the leukocyte count in the peripheric vessels immediately following the administration of arsphenamin does not occur after silver arsphenamin. In reviewing the different cases, it will be found that neither very high nor abnormally low original values made any material difference. Thus, Cases 47, 48, 53 and 55 showed a high initial count, being well over 12,000, yet there was no change exceeding the margin of errors. On the other hand, in Cases 45, 48, 51 and 52 there was a decided increase of about one-third the original value, thus making possible a comparison with the results following injections of arsphenamin. In order to ascertain whether possibly abnormal conditions prevailed (such as play a rôle in preventing the decrease in the number of leukocytes following epinephrin injections) two patients were given intradermal injections of a nonspecific milk preparation after the intravenous injection of silver arsphenamin. Except in a few skin conditions, the latter injections are known to produce leukopenia. In two cases (57 and 58), the injections of the milk preparation were followed by a decided decrease of leukocytes in the peripheric vessels, thus demonstrating a different blood picture after injections of arsphenamin and silver arsphenamin.

EFFECT OF SILVER ARSPHENAMIN ON PATIENTS REACTING WITH ANGIONEUROTIC SYMPTOMS TO ARSPHENAMIN

It is well known that patients who react to arsphenamin with more or less manifest symptoms of the angioneurotic type, tolerate silver arsphenamin without any disturbance; it was therefore suggested to extend the investigations to include these patients. Some interesting observations were made, but before discussing them it will be well to report the cases in detail.

The patient in Case 60 had a reaction following the last administration of arsphenamin, but no manifestations after injections of silver arsphenamin.

CASE 60.—C. B., a man, aged 24.

9,000	
	Injection of silver arsphenamin
6,000	½ minute after beginning treatment
7,200	3 minutes after beginning treatment
9,800	10 minutes after beginning treatment
9,200	20 minutes after beginning treatment

The patient in Case 61 received six previous treatments with arsphenamin. After the last injection, the patient felt slightly ill (see Case 33 in the foregoing article). After receiving silver arsphenamin, he complained of slight nausea from the fourth to the twelfth minute after the beginning of injection.

CASE 61.—M. B., a woman, aged 35.

7,600	
	Silver arsphenamin injection
5,200	½ minute after beginning treatment
3,200	2 minutes after beginning treatment
3,000	4 minutes after beginning treatment *
2,800	10 minutes after beginning treatment †
2,000	12 minutes after beginning treatment
8,200	20 minutes after beginning treatment ‡
7,800	30 minutes after beginning treatment
7,800	40 minutes after beginning treatment

* Reaction not very marked.
† Feels a little better.
‡ Feels well.

The patient in Case 62 had received five previous injections of arsphenamin; he felt sick after the last injection; no manifestations followed the administration of silver arsphenamin.

CASE 62.—H. W., a man, aged 54.

10,000	
	Silver arsphenamin injection
10,000	1 minute after beginning treatment
10,400	3 minutes after beginning treatment
10,600	6 minutes after beginning treatment
12,200	10 minutes after beginning treatment
11,800	20 minutes after beginning treatment
11,000	30 minutes after beginning treatment
11,000	40 minutes after beginning treatment

The patient in Case 63 received one previous injection of arsphenamin, which produced nausea (see Case 38); no manifestations followed injections of silver arsphenamin.

CASE 63.—B. E., a young woman, aged 19.

12,200	
	Silver arsphenamin injection
10,800	½ minute after beginning treatment
11,400	3 minutes after beginning treatment
12,000	10 minutes after beginning treatment
12,200	20 minutes after beginning treatment
11,800	30 minutes after beginning treatment

The patient in Case 64 received five previous treatments with arsphenamin (see Case 39); after the last treatment, she complained of headache and nausea lasting about ten minutes. No symptoms followed the administration of silver arsphenamin.

CASE 64.—L. N., a woman, aged 30.

8,400	Silver arsphenamin injection	
5,200	½	minute after beginning treatment
4,200	2	minutes after beginning treatment
2,600	10	minutes after beginning treatment
6,200	20	minutes after beginning treatment
9,400	30	minutes after beginning treatment
8,800	40	minutes after beginning treatment

The patient in Case 65 had received four previous arsphenamin injections; after the last one the patient was nauseated for about ten minutes. From five to six minutes after beginning the injection of silver arsphenamin, the patient complained of nausea; there were no objective manifestations; the only unusual symptom was profuse bleeding for twenty-five minutes from the needle prick in the ear.

CASE 65.—B. G., a man, aged 35.

12,400	Silver arsphenamin injection	
10,800	½	minute after beginning treatment
10,000	2	minutes after beginning treatment
4,000	5	minutes after beginning treatment *
6,000	10	minutes after beginning treatment
8,000	15	minutes after beginning treatment
8,000	20	minutes after beginning treatment

* Feels slightly ill.

The patient in Case 66 (Patient 36 of the previous communication), after the fourth injection had severe manifestations of a nitritoid crisis. The patient was small and obese and, before injection, his face and hands were markedly cyanotic.

CASE 66.—E. G., a man, aged 45.

9,800	Silver arsphenamin injection	
7,400	½	minute after beginning treatment
8,800	4	minutes after beginning treatment
10,000	10	minutes after beginning treatment
9,800	20	minutes after beginning treatment
10,200	30	minutes after beginning treatment
10,000	40	minutes after beginning treatment

CASE 67 (see Case 66).—E. G., a man, aged 45.

10,400	Silver arsphenamin injection	
12,000	1	minute after beginning treatment
11,800	2	minutes after beginning treatment
10,400	5	minutes after beginning treatment
10,000	10	minutes after beginning treatment
11,200	20	minutes after beginning treatment
10,800	30	minutes after beginning treatment
10,800	40	minutes after beginning treatment

In the patient in Case 69 (see Case 32), the fifth arsphenamin treatment was followed by an intense reaction, as described above. After the administration of silver arsphenamin, the patient complained of headache and nausea, the face was first pale and later slightly cyanotic. Ten minutes later all symptoms had disappeared.

CASE 69.—A. T., a man, aged 25.

8,800		
		Silver arsphenamin injection
8,200	1	minute after beginning treatment
6,800	3	minutes after beginning treatment
6,400	5	minutes after beginning treatment
5,600	10	minutes after beginning treatment
4,600	15	minutes after beginning treatment *
12,800	20	minutes after beginning treatment †
11,200	25	minutes after beginning treatment
12,000	30	minutes after beginning treatment
9,800	40	minutes after beginning treatment

* Reaction.
† Feels better.

The patient in Case 70 is the same patient reported in Case 69. Silver arsphenamin was administered again eight days later and was followed by a similar reaction.

CASE 70.—A. T., a man, aged 25.

8,800		
		Silver arsphenamin injection
8,200	1	minute after beginning treatment
6,800	3	minutes after beginning treatment
6,400	5	minutes after beginning treatment
5,600	10	minutes after beginning treatment
4,600	15	minutes after beginning treatment *
12,800	20	minutes after beginning treatment †
11,200	25	minutes after beginning treatment ‡
12,000	30	minutes after beginning treatment
9,800	40	minutes after beginning treatment

* Reaction.
† Feels better.
‡ Feels well.

In reviewing this second series of cases, new points of interest are revealed. While, as a rule, silver arsphenamin does not produce any change in the white blood count, these cases do show a decided decrease in leukocytes similar to that following arsphenamin.

In studying the different cases, three (Cases 62, 63 and 67) will be found to present no changes in the blood picture. Four cases showed a decided decrease, some to two-thirds the original value (Case 60); occasionally a case will present such a remarkable picture as in Case 64; within two minutes, the original leukocyte count of 8,400 had dropped to 4,200, and after ten minutes it reached the surprisingly low figure of 2,600; no untoward manifestations of any kind were observed in this case.

A certain percentage of the cases were characterized by a slight reaction accompanying the decrease in leukocytes. The reactions con-

sisted of uneasiness and a sensation of emptiness in the head; the symptoms always disappeared after a few minutes. When comparing the number of patients suffering from these slight by-effects with the total number of silver arsphenamin injections given in the course of the last six months, the proportion is practically negligible; numerically expressed, it amounts to 390. If, on the other hand, all cases presenting slight angioneurotic symptoms after injections of silver arsphenamin are checked up for symptoms following injections of arsphenamin, the important observation is made that every patient evidencing minor symptoms of the angioneurotic complex after injections of silver arsphenamin presents the same condition greatly intensified after the administration of arsphenamin; in other words, the proportion is 100 per cent.

This problem becomes highly interesting when the following facts are borne in mind:

Of all the patients showing angioneurotic symptoms after the administration of arsphenamin, all but the patient in Case 62 showed a decided drop in the peripheric leukocyte count after the administration of silver arsphenamin. It will not be necessary to detail the acute decrease in the peripheric leukocytes as being due to the acute appearance of a rapidly progressing reaction of the involuntary nervous system. Our investigations resulted in the interesting observation that as a rule intravenous injections of silver arsphenamin do not change the leukocytic blood picture. Only a small number of cases present an exception to this rule; they show a decrease of leukocytes, occasionally marked, and a few reveal slight symptoms of the nitritoid type. We therefore came to the conclusions: (1) that the decrease of leukocytes in the peripheric blood—a transient disturbance of the vascular innervation—must be regarded as a phase of the nitritoid crisis, and (2) that severe cases of acute nitritoid crisis are due to a preexisting disturbance in the reactivity of the autonomic nervous system. Recent investigations in cases in which the patients were treated with silver arsphenamin tend to confirm these findings. Furthermore, cases developing reactions after injections of arsphenamin are readily distinguished from those without manifestations. While silver arsphenamin, as a rule, does not produce reactions in the blood, persons who have reacted to arsphenamin show the same symptoms in the blood and in the involuntary nervous system even though such processes are not accompanied by clinical symptoms. This is an unfailing sign that the autonomic nervous system of these patients reacts differently to the same drug; in other words, that it posesses a different reactivity. Even though the results of our investigations of patients treated with silver arsphenamin differ widely from those following arsphenamin, they nevertheless confirm our previous investigations, thus accentuating our conclusions that the symptoms of

tho so-called nitritoid crisis which are observed in some patients, even after faultless technic and dosage, are not so much due to the drug as to a change in the reactivity of the body due to physical conditions. Moreover, the small number of patients who do show a reaction in the blood after silver arsphenamin are the same who react abnormally after the administration of arsphenamin.

Silver arsphenamin, therefore, is a drug which is usually tolerated without any reaction on the part of the neurovascular system. In what degree this fact is related to the therapeutic efficacy of the preparation is beyond the scope of the present paper to determine, and will have to be considered at a later date. It is definitely determined that a reaction of the involuntary nervous system occurs, measurable in the degree of peripheric leukopenia, and indicating a preexisting disturbance in this system. The question as to whether these changes in reactivity are due to constitutional factors or to a localization of the syphilitic infection in the neurovascular system itself or in any of its important parts, still remains unanswered. However that may be, silver arsphenamin is normally tolerated without reactions on the part of the involuntary nervous system; certain changes which may be observed in patients with a hypersensitive involuntary nervous system never reach the plane of severity implied by the term nitritoid crisis. This has been known for some time, so that in cases in which arsphenamin produced reactions we have invariably substituted silver arsphenamin. In our investigations we have thus found a scientific explanation for what has heretofore been purely empiric deduction.

CONCLUSIONS

Every intravenous injection of arsphenamin is followed by a slight decrease of leukocytes in the peripheric vessels of the entire body, indicating a reaction of the involuntary nervous system. This decrease is marked in patients who develop manifestations of the so-called nitritoid crisis.

Intravenous injections of silver arsphenamin are generally unaccompanied by any change in the leukocytes, thus indicating that there is no reaction or disturbance of the involuntary nervous system and the vascular system of the body.

The only exceptions to this rule are found in a few persons, namely, the same who develop symptoms of the so-called nitritoid crisis after injections of arsphenamin.

This is further proof that the rare reaction after silver arsphenamin is caused by a previous disturbance of the involuntary nervous system and is not occasioned by the drug itself.

Abstracts from Current Literature

Value of Radiation Therapy in Ophthalmology. Sanford Withers, Am. J. Ophth. **7**:514 (July) 1924.

This article deals with the use of radium in the treatment of epitheliomas of the eyelids and the cornea, sarcomas, carcinomas, angiomas, nevi, keloids, xanthoma palpebrarum and other diseases observed by the ophthalmologist.

Attention is called to the observation that the normal structures of the eye, particularly the cornea, sclera, lens and retina, are histologically radio-resistant.

Treatment of Carcinoma of the Conjunctiva with Radium. F. M. Johnson, Am. J. Ophth. **7**:589 (Aug.) 1924.

The seven cases reported were treated with both filtered and unfiltered radium emanation at the General Memorial Hospital. Two types of lesions are considered—the basal cell carcinoma, which is said to be rare, and the acanthomatous carcinoma, which is subdivided into papillomatous and ulcerative types.

Unfiltered radiation is the agent of choice over heavily filtered radiation.

When intrinsic ocular structures are not involved, such treatment is considered of curative value. In more advanced cases, combined surgical and radium treatment are indicated.

Surgical measures alone are said to favor local and regional spread of a disease which is usually restrained in its growth by the fibrous outer layer of the eyeball.

A Case of Sarcoma of Eyelids. J. A. Fisher, Am. J. Ophth. **7**:619 (Aug.) 1924.

This is a report of a patient in whom all four eyelids were involved, and metastasis had occurred through the right antrum to the cervical glands.

H. R. Foerster, Milwaukee.

Syphilitic Arthritis with Eosinophilia: Recovery of T. Pallidum from the Synovial Fluid. A. M. Chesney, J. E. Kemp and W. H. Resnik, Bull. Johns Hopkins Hosp., August, 1924, p. 235.

The authors report two cases of syphilitic arthritis. Case 1 is characterized by enlarged and painful lymph glands. The knee joints presented the picture of a subacute arthritis with hydrops and without periarticular thickening or changes in bone or cartilage. The temporomandibular, sternoclavicular, acromioclavicular and left ankle joints were also the seat of a subacute arthritis. The patient had slight fever and an enlarged spleen. Ten per cent. of eosinophils were present. Serum from lymph nodes and the joint fluid inoculated into a rabbit's testicles proved positive for *Spirochaeta pallida.*

Case 2 was similar in every respect to Case 1, except that there was no splenic enlargements or no hydrops of the knee. In Case 2, inoculation of an emulsion of the lymph node into a rabbit's testicles proved positive. All inoculations carried out in these two cases were 100 per cent. positive, showing that these two strains possessed marked virulence for the rabbit.

The unusual features of these two cases is the marked tenderness of the lymph nodes. Eosinophilia has been regarded by some as in some way linked with the involvement of the skin rather than due to syphilis itself, although this has been disputed by others. Neither of their patients showed any cutaneous manifestations. The occurrence of a subacute polyarthritis in early syphilis has long been known. In these patients, there was no evidence of an acute gonococcal infection in the genito-urinary tract; on the other hand, the positive inoculation tests with the lymph nodes proved the presence of an active syphilitic infection. In view of the involvement of the temporomandibular and sternoclavicular joints, there was a similarity in the distribution to gonococcal arthritis, and the resemblance was the more striking in the one case with "painful heels." However, the prompt response to arsphenamin treatment leaves no doubt in their minds that the arthritis was syphilitic in nature. The recovery of *S. pallida* from the synovial fluid of one of these patients indicates that in syphilitic arthritis these organisms may be actually free within the joint cavity itself. So far as can be ascertained from a survey of the literature, this organism has not previously been recovered from the joint fluid of patients with acquired syphilis.

McCafferty, New York.

A Case of Raynaud's Disease Involving the Feet, the Left Retina and the Heart Wall. C. E. Shinkle, J. A. M. A. **83**:355 (Aug. 2) 1924.

The disease began suddenly following a period of nervous stress. When the eye became involved the process in the retinal artery could be observed. These arteries were uniformly shrunken. The arteries dilated when amyl nitrite was given and contracted when the effect of the drug wore off.

Glover's Mange Cure for Diseases of the Scalp or Loss of Hair. M. P. Whichard, J. A. M. A. **83**:356 (Aug. 2) 1924.

This is a case report in which a severe dermatitis of the scalp, face, and neck followed the application of Glover's Mange Cure to the scalp. The case is reported as an example of the dangers inherent in preparations of this sort as well as an example of the need of legislation for the protection of the public against the promiscuous sale of potentially harmful preparations.

The Dick Test in Normal Persons and Acute and Convalescent Cases of Scarlet Fever: Immunity Results with Scarlet Fever Toxin. A. Zingher, J. A. M. A. **83**:432 (Aug. 9) 1924.

Zingher gives the results of a thorough investigation of the Dick test from the clinical standpoint. It was found to be a reliable index of immunity and susceptibility to scarlet fever. It will indicate susceptible persons who require passive immunization with scarlet fever antitoxin. It is of assistance in the diagnosis of scarlet fever, as a strongly positive reaction early in a doubtful case and again late in convalescence speaks against the diagnosis of scarlet fever.

In 141 scarlet fever patients, the Dick test was positive early in the disease, but became negative by the seventh to tenth day. Of 170 scarlet fever patients tested during convalescence, 158 (93 per cent.) gave a negative Dick reaction.

Active immunization with scarlet fever toxin is a safe procedure. The Dick test, in conjunction with the employment of scarlet fever toxin, aids materially in solving the problem of scarlet fever control.

METALLIC MERCURY SUSPENSIONS: THERAPEUTIC RESULTS AND DELETERIOUS EFFECTS OF THEIR INTRAVENOUS AND INTRAMUSCULAR INJECTION. H. N. COLE, J. G. HUTTON, J. RAUSCHKOLB and T. SOLLMANN. J. A. M. A. **83**:593 (Aug. 23) 1924.

Cole and his co-workers investigated mercodel (formerly named lueside) a product containing finely triturated mercury in glucose, in the ratio of about 1:5. This work was done at the instance of the Council on Pharmacy and Chemistry of the American Medical Association.

The preparation is given intravenously in sterile distilled water, each dose containing 0.5 gm. of mercury. The product was found to have definite therapeutic effects. In eight cases of chancre, spirochetes disappeared practically as rapidly as with arsphenamin. In secondary cases, the effect on lesions was almost as rapid as with arsenical preparations and certainly more rapid than after the use of other mercurials. Toxic phenomena, such as nitritoid crises, renal irritation and digestive disturbances were not pronounced, but local irritation (endophlebitis) occurred in nearly every case. Of more importance was the production of severe ulcerative stomatitis, from which one patient died. The stomatitis caused by the preparation does not appear to be entirely controllable by dosage unless the amount given is so small as to be therapeutically ineffective.

The authors conclude that while this preparation is effective, until the conditions which influence its toxicity are better known and controlled, the risks appear to be too great to justify its use.

MICHAEL, Houston, Texas.

THE REACTION OF THE CANCER CELL. WILLIAM WOGLOM, J. Cancer Res. **8**:34 (April) 1924.

The conclusions drawn by this investigator are that cancer cells do not differ appreciably in reactions of alkalinity from normal tissues of the same species.

SOME NOTES ON CANCER. WILLY MEYER, J. Cancer Res. **8**:45 (April) 1924.

After a thorough and extensive study of the literature, the author, formerly a supporter of the parasitic theory of cancer origin, states emphatically, in the presidential address before the American Association for Cancer Research, that adherence to such a theory is no longer tenable. He states that cancer cells descend from normal cells of the tissue in which the cancer arises, that chronic irritation is ordinarily the starting point of developments tending toward cancer and that in the process of transformation of the cells from one state to the other, parasites, like numerous other nonspecific factors, such as mechanical, thermal, actinic, chemical, endocrine and hereditary, stand as inciting but incidental factors.

More than one person may receive a nonspecific inciting factor from the same source, such as a "cancer house" or "cancer district" and then independently, by reason of the same, may or may not develop cancer.

Systematic rat extermination is urged as one mode of attack in a campaign of cancer prevention, it being believed that nematode infested rats are one of the sources of cancer origin and contribute to the spread of the disease by contaminating water supplies, truck gardens and the like. Various arguments previously advanced favoring a specific infection as a direct cause of cancer are thoroughly discussed and discarded, and Virchow's theory of fifty years ago, that irritation is the cause of cancer, is upheld.

SUMMARY OF THE RESULTS OF EXPERIMENTS ON THE PATHOGENESIS OF EPITHELIAL GROWTHS. K. YAMAGIWA and K. MURAYAMA, J. Cancer Res. **8**:119 (April) 1924.

Experimental mammary epitheliomas were produced in rabbits by repeated injections of tar, paraffin and hydrous wool fat, alone and in combination, into the mammary glands. Hydrous wool fat feeding accelerated the development of folliculo-epitheliomas caused by repeated applications of tar to the ears of rabbits.

Long continued hydrous wool fat feeding is said to produce a general hyperkeratosis.

H. R. FOERSTER, Milwaukee.

AN UNUSUAL FORM OF SKIN CANCER, AND OBSERVATIONS REGARDING ITS GENESIS. ALFRED ELIASSOW, Dermat. Wchnschr. **78**:365 (March 29) 1924.

An otherwise healthy woman, aged 52, presented many scattered nodules of various sizes, brownish, scaling and crusted, some of which had been present for nearly twenty years. There were also senile keratoses. Histologic study showed that the nodules were benign epitheliomas, except one which the patient had constantly scratched over a long period of time, and which proved to be a prickle cell epithelioma. The importance of trauma is stressed.

CLINICAL AND SEROLOGIC EXPERIENCES WITH THE MEINICKE REACTION IN SYPHILIS. WULF RÜDER, Dermat. Wchnschr. **78**:374, 403 (March 29 and April 5) 1924.

After observing the results of this test in a large series of cases, the author concludes that the latest modification of the Meinicke reaction is valuable on account of its sensitivity and its technical simplicity, but since there is a tendency to unspecific results, he advises that it be used only together with the Wassermann or Sachs-Georgi reactions.

THE ETIOLOGY OF BOECK'S SARCOIDS. R. MICHALIK, Dermat. Wchnschr. **78**:445 (April 19) 1924.

A girl, aged 17, had presented a nodular eruption for several months. At necropsy, pulmonary tuberculosis was found, and the lesions were diagnosed as those of Boeck's sarcoid. In the author's opinion, the pulmonary infection was the etiologic factor, with a skin which reacted in a peculiar manner.

A CASE OF CONGENITAL ICHTHYOSIFORM ERYTHRODERMA. BOCKHOLT, Dermat. Wchnschr. **78**:449 (April 19) 1924.

The author reports the case of a boy, aged 16, with the histologic findings. In his opinion, hyperkeratosis was primary, while erythroderma and eczematization were secondary.

THE PATHOLOGIC ANATOMY OF QUINCKE'S EDEMA. PANOFSKY and STAEMMLER, Dermat. Wchnschr. **78**:469 (April 26) 1924.

Giving the findings in a case which came to necropsy, in which the sympathetic and endocrine systems were investigated histologically, the authors conclude that thyroid changes, perhaps congenital, are possibly causative.

A Case of Seronegative Primary Syphilis with Succeeding Meningeal Manifestations. A. Nadel, Dermat. Wchnschr. **78**:481 (April 26) 1924.

In this case, the diagnosis of chancre was made with the dark field, and intensive arsenical and bismuth treatment was given, totaling about 4 gm. of neo-arsphenamin. About five months after the date of infection, persistent headaches began, and the spinal fluid was found to be positive. The Wassermann reaction of the blood had never been found to be positive.

Two Remarkable Cases of Urticaria Pigmentosa. Steffi Uliczka, Dermat. Wchnschr. **78**:497 (May 3) 1924.

The first case was remarkable on account of vesicle formation, a similar case having been reported by MacLeod in the *British Journal of Dermatology* in 1907; in the second case, many of the patches bore a resemblance to nevi, and one patch had been present at birth.

The Thymus-Therapy of Psoriasis Vulgaris. Erich Steiner, Dermat. Wchnschr. **78**:499 (May 3) 1924.

In eleven patients, the thymus area was exposed to the roentgen rays, and thymus extract was administered internally. In three of these the lesions disappeared, to recur after five weeks in one case; two were classified as "improved," one as "aggravated," and the remaining five as "uninfluenced."

Stocking Eczema: An Inflammation of the Skin Due to Poorly Dyed Stockings. Moritz Porosz, Dermat. Wchnschr. **78**:510 (May 3) 1924.

The author reports two cases occurring in his practice, both in men; he gives an analysis of the dyestuff used.

Experiences with the Latest Modifications of the Flocculation Reactions of Dold and Meinicke. A. Poehlmann, Dermat. Wchnschr. **78**:521 (May 10) 1924.

If performed with a thick extract, the third modification of the Meinicke reaction is usually specific, but is often negative in cases of frank syphilis, according to the author. At present the Sachs-Georgi reaction is considered second best to the Wassermann reaction, and superior to the Meinicke reaction.

Further Experiences with the Bismuth Treatment of Syphilis and Observations on Vanadium Therapy. Richard Neuendorff, Dermat. Wchnschr. **78**:532 (May 10) 1924.

Having employed bismuth preparations both intravenously and intramuscularly, the author concludes that they are a suitable substitute for mercury, and seem most effective when used intramuscularly in conjunction with arsphenamin. Twelve per cent. vanadium pentoxid was given intramuscularly in emulsion and in solution and found effective against syphilis but productive of toxic signs similar to those following the use of bismuth, but much more severe; in one instance there was an urticarial outbreak lasting four days.

VITAL STAINING OF THE HUMAN SKIN. W. VON GAZA and E. SCHÄFER, Dermat. Wchnschr. **78**:549 (May 17) 1924.

A red stain was selected as being the least objectionable for injection into the human skin. Histologic studies showed that the mesodermal elements were affected, while the epidermal cells were not, except those that had been injured. The stain seemed to pass through into the lumens of the sweat ducts. This is an introductory study.

PARKHURST, Toledo, Ohio.

MERCURY BISMUTH AND ARSENIC-FAST SYPHILIS. C. OROL, Prensa Med. Argentina **10**:907 (May) 1924.

The author reports three cases in which the patients were treated with arsphenamin, with mercury and with bismuth, respectively. In each case, there were relapses even while the patient was under treatment. When treatment is mixed, using arsphenamin and mercury or arsphenamin and bismuth, relapses seldom occur.

OCULAR HYPERTENSION IN OPHTHALMIC ZOSTER. A. URRETS, Prensa Med. Argentina **10**:910 (May) 1924.

Ocular hypertension with severe pain may precede by several days the appearance of ophthalmic zoster. In all cases of ocular hypertension, the possibility of a herpes zoster must be kept in mind.

TREATMENT OF VENEREAL ULCERS WITH HELIOTHERAPY. G. MURERO, Riforma med. **40**:505 (June 2) 1924.

Murero reports good results by exposing ulcerated chancroids and buboes to the sun's rays from fifteen to forty-five minutes every day. An average of twenty-five treatments are required to heal the ulcer.

TREATMENT OF PSORIASIS WITH BISMUTH. A. VERSARI, Riforma med. **40**:562, (June 16) 1924.

Good results were obtained by the author with injections of tartrobismuthate of potassium and sodium in two cases of psoriasis. No local treatment was employed.

LYMPHOGRANULOMATOSIS INGUINALIS. J. CAPPELLI, Gior. ital. d. mal. ven. **65**:3 (Feb.) 1924.

The French dermatologists Nicolas, Durand and Favre described before the first congress of dermatology and syphilology at Strasbourg in 1922, a new clinical entity under the name of lymphogranulomatosis inguinalis. This condition begins with a small abrasion in the genitals, usually in the penis, which rapidly disappears, leaving no trace. Shortly the lymphatic glands of the groin begin to enlarge, usually on one side, but occasionally on both sides; sometimes one gland, sometimes two or more with periadenitis and inflammatory phenomena. The glands are painful. The process ends by suppuration in small foci, with the formation of sinuses. The general condition of the patient is early affected. The temperature rises as high as 104 F. with morning remissions. There are symptoms of general infection. Cappelli reports five cases

of this condition in which he was unable to find any specific germ in the penile sore or in the glands. He agrees with the French dermatologists in considering the disease as a new clinical entity, contagious and transmitted by sexual contact.

MULTIPLE CYSTS OF THE NECK. L. MARTINOTTI, Gior. ital. d. mal. ven. **65**:19 (Feb.) 1924.

The author reports a case of multiple bilateral cysts of the skin of the sides of the neck which clinically and histologically resembled the cases of cystic adenoid epithelioma of Brooke. The cysts in his case were formed in the center of epithelial inclusions in the corium.

CORNU CUTANEUM AND EPITHELIOMA DEVELOPED ON LUPUS VULGARIS. G. A. AMBROSSOLI, Gior. ital. d. mal. ven. **65**:46 (Feb.) 1924.

The author reports of a case of lupus vulgaris of twenty-four years' duration which had never been treated, and on which developed a cornu cutaneum and prickle-cell epithelioma. The author attributes the new growth to the constant irritation of the epithelial tissues by the tuberculous toxin.

BACTERIOLOGY IN A CASE OF PELIOSIS RHEUMATICA. J. CARRA, Gior. ital. d. mal. ven. **65**:64 (Feb.) 1924.

Blood cultures in a case of purpura rheumatica produced a diplococcus with pathogenic properties for the rabbit and guinea-pig. The patient's serum agglutinated the germ in 1:500 dilutions.

PARDO-CASTELLO, Havana.

DERMATOLOGIC ABSTRACTS

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

DERMATITIS DIPHTHERIA. S. S. GREENBAUM, Am. J. Dis. Child. **28**:51 (July) 1924.

Greenbaum's patient had what was said to be an eczematous eruption on the left lower lid and on both cheeks, fissuring at the buccal commissures and fissures at the junction of the alae nasi and nasal septum with the upper lip. For almost three weeks he had been treated for what was supposed to be a simple eczematized impetigo. Suspicion was aroused when the applications usually specific for impetigo failed to produce any impression on the eruption. Cultures from the fissures were positive for the Klebs-Loeffler bacillus, although a second examination both of the skin and the nasal mucosa was negative. The patient wsa given 3,000 units of diphtheria antitoxin intravenously. Within twenty-four hours there was fully 90 per cent. improvement. Ten days later the fissures were but vestiges of what had previously been present. Another culture at this time was positive for the Klebs-Loeffler bacillus.

ROENTGENOTHERAPY OF CARBUNCLES AND THEIR INFECTIONS. F. M. HODGES, Am. J. Roentgenol. & Radium Therap. **11**:442 (May) 1924.

Hodges has treated nine large, extensive, ulcerating, sloughing carbuncles with the roentgen ray. In all of the cases the pain was almost entirely relieved in from six to twenty-four hours. In five of the nine cases, the pathology changed rapidly, usually within two days, into a fairly large central abscess which drained freely for two or three days and healing followed promptly. In only one case was there any extension of the pathology following radiation. This carbuncle was located in the parotid area and too small a dose of the ray was used on account of fear of a parotid reaction in an extensive surrounding infection. A larger dose four days later was followed by good results.

HEAT REGULATION IN RABBITS. R. W. KEETON, Am. J. Physiol. **69**:307 (July) 1924.

The data obtained by Keeton suggest that "insensible perspiration" in man is due to a direct vaporization of water from the tissues.

VASCULAR REACTIONS OF SKIN TO INJURY. T. LEWIS AND R. GRANT, Heart **11**:209 (May) 1924.

Lewis and Grant are convinced that the reactions of the skin to stroking result from the liberation of a chemical substance in the skin, this substance having a histamin-like action on the blood vessels and nerves. Less extensive comparisons of the skin's responses to scratches and pin pricks, and to excessive heat, indicate that these responses are of a similar or identical kind and that these are determined by a clinical stimulus.

PHENOMENA ENCOUNTERED IN ATTEMPTING TO TRANSMIT VARICELLA TO RABBITS. T. M. RIVERS AND W. S. TILLETT, J. Exper. Med. **39**:777 (June) 1924.

A description of the intradermal method of inoculation and the results of the experimental work facilitated by its use is given by Rivers and Tillett It gave more reliable results than those obtained by smearing the virus on the scarified skin. Study of the immunologic reactions failed to bring any evidence that the virus under investigation bears an etiologic relationship to varicella.

OCCUPATIONAL STIGMA ON BREAST OF SHOEMAKERS. M. O. OPPENHEIM, J. Indust. Hyg. **6**:67 (June) 1924.

A pathologic change in the skin of shoemakers, which has not yet been described in literature, is recorded by Oppenheim. In the sternal region of the breast, usually in the line connecting the two mamillae and bordered laterally by the insertion of the pectoral muscles, there is often a somewhat darkly pigmented zone of the skin extending a hand's breadth above and below the line. This zone shows comedones—sometimes only a few, sometimes so many that not one follicle is left free. The comedones are either punctiform or of considerable size, and sometimes occur in groups of two and three. In some cases small brown or black prickles, from 1 to 2 mm. long (*Lichen spinulosus* or *Trichostasis spinulosa*), are lodged in the orifices of the follicles. Many cases do not show any other changes. There are, however, cases showing inflammatory changes, such as occur in acne vulgaris. Then there are present folliculitis, perifolliculitis with pustule formation and scars, and also milia and irritation of the sebaceous glands. But these changes in the sebaceous glands

are usually not very prominent, and hyperkeratotic processes, such as belong to the picture of "pitch skin" are either entirely absent or barely suggested. The author believes that this is, to a certain extent, an abortive, circumscribed form of pitch skin closely connected with the shoemaker's occupation, and not with alterations of the skin due to seborrhea and acne vulgaris. This is proved by these facts: (*a*) that the condition often remains exclusively limited to the skin area described above, the face and neck never showing a trace of acne vulgaris; (*b*) that this affected area of skin in cases of coexisting acne vulgaris exhibits a much more marked formation of comedones than the skin in the immediate vicinity, and (*c*) that this particular area in other workmen and artisans, even if they are suffering from seborrhea and acne, is usually not more severely attacked by acne lesions than is in keeping with the disease elsewhere (the areas of the skin lying over the sternum, forming the anterior sweat channel, are usually involved in acne). The causes of these skin alterations are the use of pitch and the way in which a shoemaker works. As a rule, he plies his trade dressed in his leather apron, in shirt sleeves, with his breast uncovered. He sits on a low stool and presses the shoe against the middle of his breast. The leather apron, soiled with pitch, rubs and presses the skin of the sternal region below the mamillary line in the very place where, in the case of rickets, shoemakers' or infundibular breast develops. This accounts for the local "pitch skin," which varies in intensity according to the degree of predisposition to seborrhea.

Lack of Identity Between Viruses of Herpes and Lethargic Encephalitis. F. Parker, J. M. Res. **44**:289 (March) 1924.

Parker holds to the belief that if the virus of herpes and that of lethargic encephalitis are identical, these bodies should occur in the brains of human beings dying of lethargic encephalitis. He has carefully studied, histologically, the brains from seven cases of lethargic encephalitis in human beings, making many sections from each brain, and has failed to find any such bodies. The absence of these bodies in lethargic encephalitis would seem conclusive proof that the two viruses are not identical.

Syphilitic Mesencephalitis. S. A. K. Wilson and S. Cobb, J. Neurol. **5**:44 (May) 1924.

Four cases are presented by Wilson and Cobb as evidence to support the thesis that Argyll Robertson pupil and tremor occurring in the same case of syphilis are not merely coincidental, as held by most former investigators of the subject. Rather does this combination (with its various elaborations such as oculomotor palsy and rigidity) indicate an incidence of the syphilitic process on the midbrain, a true syphilitic mesencephalitis.

Temperature After Spinal Transection; Shivering. C. S. Sherrington. J Physiol. **58**:405 (May) 1924.

Sherrington found that shivering seems not to require the afferent nerves of the lung or of the shivering muscles. Shivering, reflex or "central," requires, like Richet's heat polypnea, some central nervous mechanism anterior to the midbrain.

Surgical Use for Insulin. I. B. Bartle, Northwest Med. **23**:255 (June) 1924.

People who have chronic furunculosis with high blood sugar, even though there is no sugar in the urine, are treated with insulin by Bartle on the basis that they are potential diabetics. Strict regulation of the diet and in many cases the administration of insulin in proper doses has been universally successful in Bartle's experience. It is his routine practice in surgery, when infective cases are not progressing as they should, to make the blood examination. In many of these cases there is an excess of blood sugar. When this is properly corrected, the patient begins to show improvement.

Granuloma Inguinale. S. S. Schochet, Surg., Gynec. & Obst. **38**:759 (June) 1924.

Schochet reports the first case of granuloma inguinale from Chicago. Sixty-six cases have been recorded from the United States. Schochet urges that a careful study of all ulcerations about the genitals be made for Donovan bodies, especially in those cases in which syphilis and tuberculosis have been eliminated.

Skin Manifestations of Leukemia and Allied Conditions. I. L. McGlasson and C. F. Lehmann, Texas State J. M. **20**:177 (July) 1924.

A case of Hodgkin's disease, one of lymphosarcoma, and one of mycosis fungoides are reported by McGlasson and Lehmann, showing skin changes which may be classed as leukamides, and also a case of lymphatic leukemia which presented skin tumors characteristic of true lymphomas.

Mortality at Bogota. E. Enciso Ruiz, Rep. de Méd. y Cirugia **15**:362, 1924.

Enciso Ruiz relates that since early in the century measles has caused a large number of deaths every eighth year at Bogota. The next peak is due in 1930. Each eighth year the epidemic spreads rapidly in five months and then dies out from lack of further susceptible subjects or loss of virulence. The virus may persist for seven years in some intermediate host until it acquires virulence for man again.

Erythema Nodosum with Tuberculous Bacillemia and Meningitis. T. P. Weber, Brit. J. Dis. Child. **21**:119 (April-June) 1924.

Weber believes that the opinion entertained for a time by some that erythema nodosum was always causally connected with tuberculosis must be definitely abandoned. In many cases it cannot with certainty be attributed to tuberculosis, and not rarely occurs independently of any other obvious disease, or in association with any one of a variety of diseases, and in some cases the administration of bromides appears to have acted as an exciting factor. In some cases, however, erythema nodosum is a manifestation of a tuberculous bacillemia.

Varicella and Herpes Zoster. A. Netter, Bull. de l'Acad. de méd. **91**:494 (April 22) 1924.

Netter has compiled sixty-nine cases of zona for which varicella seemed to be responsible, or vice versa, mostly published in other countries. He now tabulates seventy-two additional cases, all in France. The same virus seems

able to induce varicella or herpes zoster at will, changing arbitrarily at brief intervals. Complement fixation tests show a crossed affinity of the antigens, resembling that between smallpox and vaccinia.

TREATMENT OF NEUROSYPHILIS. A. MARIE AND V. KOHEN, Bull. méd. **38**:728 (June 28) 1924.

Marie and Kohen have now a record of more than ninety general paralysis cases in which bismuth associated with shock treatment was followed by pronounced remissions in over 50 per cent. while the mortality was much less than in control groups. Of the three forms of what they call leukopyretotherapy tested (parenteral injections of milk, sodium nucleinate, or tuberculin), tuberculin proved the most effectual. The bismuth was injected the day following the tuberculin; the dose of the latter was regulated to induce fever and leukocytosis without too much reaction. From ten to twelve of these therapeutic shocks were generally given, at three or four day intervals as a rule. The disappearance of the Argyll Robertson sign and its reappearance later were accepted as signals for suspension and resumption of the treatment. The effect was always excellent in tabes and other forms of neurosyphilis, besides general paralysis. The pains in tabes have not returned during the ten or twelve months to date and the patients are attending to business as usual. The combination seemed harmless; they ascribe to bismuth a greater capacity for penetrating into the nerve centers, in comparison with arsenicals and mercury.

RECURRENCE AFTER TREATMENT OF SYPHILIS. C. SIMON AND J. BRALEZ, Bull. méd **38**:732 (June 28) 1924.

Simon and Bralez's seven cases seem to teach that each series should total at least 2 gm. of bismuth to ward off the possibility of neurorecurrence. The intervals were from two to twelve months except in one patient who seemed to be refractory to the bismuth, the recurrence appearing in less than a month after three series totaling 9.5 gm.

JOINT MANIFESTATION IN TARDY CONGENITAL SYPHILIS FATOU, Bull. méd. **38**:735 (June 28) 1924.

Fatou lists among the various elements which should suggest the possibility of a syphilitic origin for joint affections at almost any age, the purulent character of the fluid in the joint, whether the arthritis is acute or torpidly chronic; the maximal positive Wassermann reaction in this fluid, even when it may be negative in the blood; the usual symmetry of the lesions; the predilection of the larger joints, and the way in which the acute may merge into a chronic phase, losing the signs of inflammation. The inherited syphilis may lie latent for fifteen or twenty years or more, with normal development, and then it may flare up in a comparatively virulent form in joints, calling for intensive and prolonged treatment for the syphilis without wasting time on a diagnostic blunder.

CHANGE IN COLOR OF SKIN AFTER LOSS OF VISION. VRTELOWNA, Compt. rend. Soc. de biol. **90**:1366 (May 23) 1924.

Vrtelowna reports experiments with twenty-five specimens of *Bombinator igneus* and fifteen of *Pelobates fuscus* in which both eyes were removed. The blind batrachians change their color, becoming darker. In normal animals

the light produces a contraction of the skin melanophores, and in the blind a dilatation of the melanophores. The darker color in the blind seems to be produced by a direct reaction of the skin to the light.

LABIAL HERPES AND HERPES ZOSTER. M. BLOCH, E. TERRIS, Compt. rend. Soc. de biol. **90**:1394 (May 30) 1924.

Bloch and Terris' patient had a herpes zoster preceeded for one week by a labial herpes. On inoculation into the cornea of rabbits, only the fluid from the labial herpes produced a keratitis.

FEVER LATE IN POSSIBLY UNRECOGNIZED SYPHILIS. M. BLOCH, Presse méd. **32**:432 (May 17) 1924.

Bloch calls attention to cases of persistent fever, with absence of physical signs, which are often labeled tuberculosis or malaria but for which old syphilitic infection is responsible. He says that in a case of indefinitely prolonged fever of pseudomalarial type, when an infectious process is not manifest, and the examination of sputum, blood, urine, and the serologic tests, hemocultures and radiography are negative, syphilis has to be considered.

NEURORELAPSES IN SYPHILIS UNDER BISMUTH THERAPY. L. CHEINISSE, Presse méd. **32**:478 (May 31) 1924.

Cheinisse insists that a relapse of syphilis treated by bismuth is exceptionally rare, if a proper preparation and an adequate dose are used.

DERMOGRAPHISM. PASTEUR VALLERY-RADOT, J. KRIEF AND R. JACQUEMAIRE, Presse Méd. **32**:517 (June 14) 1924.

Pasteur Vallery-Radot and his co-workers recall that two symptoms exist in dermographism, an erythema and edema. While the erythema is produced by a hyperirritability of the vasomotor nerves, the edema depends on an external cause and on the circulation. The external factor is the slight stroke on the skin, which causes a change in the capillary walls and effusion of the plasma. Dermographism occurs when the circulation is normal; in cases with a disturbed local circulation this phenomenon is delayed, diminished or prevented. Thus the presence of three elements is necessary for dermographism: vasomotor change of sympathetic origin, trauma, and a normal local circulation.

PIGMENT PRODUCTION IN TAR CANCER. B. LIPSCHÜTZ, Arch. f. Dermat. u. Syph. Berlin **147**:161 (June 7) 1924.

The extensive research here reported was done under a grant from the American Elizabeth Thompson Foundation, Lipschütz studying the pigmentation that followed the irritation from the tar before the tissue showed any anatomic change. The pigmentation had no connection with exposure to light or protection against it.

AURANTIASIS CUTIS. I. MIYAKE, Arch. f. Dermat. u. Syph. Berlin **147**:184 (June 7) 1924.

Miyake has had opportunity at Tokio to study five cases of yellow discoloration of the skin from eating oranges, and has succeeded in inducing the

aurantiasis in a young man. The yellow tint became evident by the time 693 oranges had been eaten. In the course of the tests he took 1,200 oranges in less than six weeks. The elimination of the carotin occurs principally through the intestinal wall and epidermis, but also through the skin glands and the kidneys.

CHRONIC GLOSSITIS AND PERNICIOUS ANEMIA. E. SCHÄFER, Arch. f. Dermat. u. Syph. Berlin **147**:201 (June 7) 1924.

Schäfer's two cases and study of the literature confirm the assumption that Möller's chronic excoriation of the tongue is a symptom accompanying pernicious anemia, and may precede the more characteristic manifestations of the latter.

RESEARCH ON EPHELIDES. H. W. SIEMENS, Arch. f. Dermat. u. Syph. **147**:210 (June 7) 1924.

The pigmentation relations between color of eyes and hair and occurrence of freckles were studied on 2,500 school children at Munich.

PSORIASIS ARTHROPATHICA. C. SCHUMACHER AND S. LAUTER, Arch. f. Dermat. u. Syph. **147**:230 (June 7) 1924.

In two cases reported, the recurring psoriasis with arthritis was of several years' standing when a course of emetin treatment was given. Both the patients reacted with extreme exacerbation of both the dermatitis and the arthritis. The latter resembled in every respect chronic polyarticular rheumatism and the roentgen findings were typical of arthritis deformans. In both cases the waves of the dermatosis and the joint symptoms rose and fell together. The patients were a man of 38 and a woman of 60, with no venereal disease in the antecedents.

MODE OF SPREAD OF CANCER IN SKIN. S. FURUTA, Arch. f. Dermat. u. Syph. Berlin **147**:251 (June 7) 1924.

Furuta's illustration of an extensive carcinosis of the trunk shows that the location of the nodules does not correspond exclusively to either lymphatics or blood vessels.

ETIOLOGY OF HERPES GROUP OF DISEASE. G. MARIANI, Arch. f. Dermat. u. Syph. **147**:259 (June 7) 1924.

Mariani concludes from his extensive research that we must recognize four main groups of manifestations from the different dermotropic and neurotropic filtrable viruses. Common to them all are cell inclusions and affinity for the skin and nervous system. The herpetiform affections are essentially vesicular, with mixed epithelial and nervous affinity; the vaccine affections are pustulous and almost exclusively epitheliotropic, as are also the vegetating and degenerative types known as molluscum contagiosum and epithelioma contagiosum. The neurotropic affections, encephalitis, rabies, and Hodgkin's disease are only exceptionally dermatropic and only under artificial conditions. The neurodermotropism, filtrability of the virus and cell inclusions have been demonstrated for nearly all of these. The question of the saprophytism of the herpetic and encephalitic virus in extradermal and extraneural

sites (saliva) is still a mystery, as also the relations between virus of this type and influenza. A number of colored plates and an extensive bibliography accompany the long article.

PURE CULTURE OF SPIROCHAETA PALLIDA. O. GRÜTZ, Arch. f. Dermat. et Syph. **147**:337 (June 7) 1924.

Grütz succeeded twice in cultivating the spirochete in pure culture in the first generation. His observations suggest the possibility of reproduction by fission and also by budding.

ARSENIC CANCER. ALIFERIS, Arch. f. Dermat. u. Syph. **147**:349 (June 7) 1924.

Aliferis reports two cases in which cancer of the skin developed after arsenic had been taken more or less regularly for years on account of psoriasis or lichen ruber acuminatus.

SYPHILIS OF THE NERVOUS SYSTEM. J. H. SCHULTZ, Deutsch. med Wchnschr. **50**:914 (July 4) 1924.

Schultz reports on four officers infected with syphilis by the same girl in 1908. One of them had a syphilis of the brain with hemiplegia, another tabes, and two died from a rapidly progressing general paralysis.

TREATMENT OF ANGIOMAS. E. MOSER, Deutsch med. Wchnschr. **50**:915 (July 4) 1924.

Moser had excellent results with Wyeth's injections of boiling water in hemangiomas.

USE OF TRYPARSAMIDE IN NEUROSYPHILIS. W. F. LORENZ, A. S. LOEVENHART, T. E. REITZ and C. P. ECK, Am. J. Med. Sc. **168**:157 (Aug.) 1924.

Lorenz et al. report their observations with tryparsamide in 185 cases of neurosyphilis. They found that tryparsamide and mercuric salicylate are therapeutically effective in early paresis, meningovascular syphilis, and, to a lesser extent, in taboparesis, tabes and in advanced paresis. The beneficial clinical results generally precede the improvement in the serology. Definite paretic psychoses disappear as the result of treatment. The mental restoration has persisted over a two year period. Visual disturbances occurred in 7 per cent. of the total number of cases treated. In tabes and taboparesis, 23 per cent. of the cases showed visual disturbance. Of thirteen cases showing amblyopia during tryparsamide therapy all but one cleared up after withdrawal of the drug. Twelve of these cases were subsequently treated with tryparsamide without further eye disturbance.

INHERITED SYPHILIS IN THE SECOND GENERATION. G. HIGOUMENAKIS, Ann. d. mal. ven. **19**:401 (June) 1924.

Higoumenakis gives the details of nine cases published since 1908 and of thirteen from his own observation, in which the inherited syphilis had flared up in the second generation, even when it had lain latent through the first generation. The Wassermann reaction may be negatvie, notwithstanding hemiplegia or other manifestations of the spirochetal lesions. Treatment should be

the same as for acquired syphilis, possibly supplemented with organotherapy, as the inherited taint in the second generation is liable to be as grave as in the first generation.

PERUVIAN VERRUCA. P. S. MIMBELA, Ann. Facul. de méd. **6**:192, 1924.

Mimbela accepts that Oroya fever and Peruvian verruca are different phases of the same infection. Vagus symptoms, fever and rapid anemia label the case at once when it is known that the patient has come from the one known narrow zone in the world in which the disease is endemic.

TESTS OF TRYPARSAMIDE. G. GUILLAIN and L. GIROT, Bull. d. Acad. d. méd. **92**:850 (July 8) 1924.

Guillain and Girot relate that their experiences in three cases of general paralysis, one of neurosyphilis and one of disseminated sclerosis do not justify the assumption that tryparsamide represents definite progress in the treatment of neurosyphilis. It did not display any more penetrating action than neoarsphenamin, but the injections were painless and always free from untoward by-effects. The Wassermann reaction in the cerebrospinal fluid was not modified, and the benzoin reaction only slightly.

THE BACTERIOPHAGE IN TREATMENT OF SKIN DISEASES. GOUGEROT and PEYRE, Compt. rend. Soc. de biol. **91**:452 (July 18) 1924.

Gougerot and Peyre treated locally with an antistaphylococcus bacteriophage added to staphylococci isolated from the pustules, four cases of a sycosis with a pustular dermoepidermitis. A complete recovery in two instances was manifest, and considerable improvement has already been realized in the two still under treatment. Good results have been obtained in treatment of recurring furunculosis.

HYPERTENSION OF SYPHILITIC ORIGIN. A. DUMAS, Paris méd. p. 26 (July 5) 1924.

Dumas reports four cases of variable high blood pressure in persons under 35, or older, in which the kidneys and aorta seemed to be normal. Treatment in time of this "solitary hypertension" might have warded off the fatal cerebral hemorrhage or gangrene compelling amputation.

SYPHILIS AND ANGINA PECTORIS. L. GALLAVARDIN, Presse méd. **32**:598 (July 16) 1924.

Gallavardin's statistics of 450 instances of angina pectoris in connection with overexertion show that angina pectoris is of syphilitic origin in all cases combined with an aortic aneurysm in 90 per cent. of patients with aortic insufficiency and in 33 per cent. of cases without aortic disturbance, but under 50 years of age.

THE BLOOD REVEALS LATENT SYPHILIS. E. LEREDDE, Presse méd. **32**:641 (July 30) 1924.

Leredde emphasizes the importance of examination of the blood in latent hereditary syphilis, *cryptosyphilis héréditaire*. In children, adenopathies, adenoids, enlargement of the spleen hydrocele and congenital malformations should suggest a syphilitic affection. They are indications for examination of the blood, although there may never have been any clinical manifestations

of syphilis, and the fixation reaction is negative. Of seventy-one syphilitic children, ranging from 1 to 16 years, not one had a normal blood composition. Anemia, monocytosis and increased proportions of polymorphonuclears are common.

EXPERIENCES IN DERMATOLOGIC CLINIC. J. L. CARRERA, Prensa méd. **11**:97 (June 30) 1924.

Carrera extols the fine results realized in psoriasis and in eczema on a gouty basis under treatment with intravenous injection of sodium salicylate. He used a 20 per cent. solution. Parenteral protein therapy proved disappointing in all the various skin affections.

FEBRILE SYPHILITIC DISEASE OF LIVER. J. B. MORELLI, Rev. méd. del Uruguay **27**:163 (May) 1924.

In Morelli's case the wetnurse had been infected by a syphilitic infant but the lesion on the nipple had healed without other manifestation. A year later jaundice with intermittent fever, afternoons, for two weeks gradually subsided under mercurial inunctions and potassium iodid. Five years later an operation for gallstones was done in spite of Morelli's protests. No gallstones but a tumor-like mass was found which proved to be an agglomeration of four gummas, confirmed by the microscope. The woman's liver seems entirely sound at present, sixteen years since the last specific treatment. The short interval between the infection and the first liver disturbance, the absence of enlargement of the spleen, the retention type of the jaundice, and the rapidly progressive character of the disturbances until arrested by treatment were the special features of the case. In another case there was slight fever every afternoon for two years in an elderly man, with a history of syphilis twenty-seven years before, with pain in the shoulder and slightly enlarged and tender liver. Laparotomy on a boy, aged 9, with intermittent fever for two weeks and enlarged liver revealed, instead of the expected abscess, several gummas.

In Artucio's case, the main features were the protracted variable fever and the enlargement of liver and spleen. The peculiarly rapid and complete cure under treatment distinguished the entire group in these febrile hepatitis cases.

SYPHILIS AMONG THE KALMUCKS. M. ROSENTUL, Deutsch. med. Wchnschr. **50**:986 (July 18) 1924.

Rosentul considers syphilis as the main cause of the decrease of the Kalmuck tribe. It is transmitted as a rule extragenitally. The Kalmucks are very hospitable, and share the pipe and glass of sour milk with all the guests. Arsphenamin injections ("the German needle") became very popular with them.

ETIOLOGY OF ERYSIPELOID. D. ACÉL, Deutsch. med. Wchnschr. **50**:988 (July 18) 1924.

Acél found bacteriologically and serologically unquestionable germs of swine erysipelas in five patients with erysipeloid.

STAINING OF GERMS IN SECTIONS. F. HORÁLEK, Deutsch. med Wchnschr. **50**:988 (July 18) 1924.

Horálek describes his method for staining *Spirochaeta pallida* in sections. A double and protracted staining with hematoxylin revealed cocci and other germs even in sections of organs which had been kept for ten years in formaldehyd.

CONSERVATIVE TREATMENT OF FURUNCLES. CANON, Deutsch. med. Wchnschr. **50**:991 (July 18) 1924.

Canon treated 110 patients with furuncles and eighteen with carbuncles exclusively with immobilization and a dressing with a weak solution of aluminum acetate.

LATENT FEBRILE HERPES. P. BASTAI and A. BUSACCA, München. med. Wchnschr. **71**:1056 (Aug. 1) 1924.

Bastai and Busacca inoculated the rabbit cornea with concentrated blood and cerebrospinal fluid from various patients. The cerebrospinal fluid produced the herpes keratitis in eighteen out of twenty-one cases, the blood in fourteen.

VIRUS OF HERPES. W. GRÜTER, München. med. Wchnschr. **71**:1058 (Aug. 1) 1924.

In 1910, Grüter produced dendritic keratitis in rabbits, with diluted vaccine lymph. Later he was able to transmit herpes infections. He found, as a rule, a less virulent virus in herpes zoster, a more virulent in febrile herpes. The herpes virus virulence increased after passage through a rabbit's brain.

TUMOR GROWTH IN RELATION TO NOURISHMENT. I. M. HÄNDEL, Ztschr. f. Kreb. **21**:281 (July 15) 1924.

Händel was unable to detect any influence on the growth of mice tumors from lack of salts in the food or addition of phosphates, but the growth of the cancer seemed to be promoted by feeding potassium, while it was checked slightly by feeding calcium.

Society Transactions

ST. LOUIS DERMATOLOGICAL SOCIETY

April 9, 1924

JOSEPH GRINDON, M.D., *Chairman*

A CASE OF ACQUIRED LEUKODERMA CONFINED TO THE FACE. Presented by DR. BROCKELMAN.

Miss E. D., aged 46, at the age of 30, had an almost sudden appearance of depigmented spots on the face, which became stationary, except for the development of a few more lesions at the periphery. No preceding illness could be accounted for. During the time of menstruation, the lesions were more noticeable.

The irregularly shaped white spots varied in size from that of a pea to that of a bean, and showed in their distribution a rough symmetry. The pigment of the surrounding skin was markedly increased.

DERMATITIS DYSMENORRHEICA. Presented by DR. NORMAN TOBIAS from DR. ENGMAN'S Clinic, W. U. Disp.

A woman, aged 35, said that she had had an eruption over the clavicular regions with each menstrual period for the last six months. The eruption on the right clavicular region was of two months' duration. The eruption consisted of a patch of urticaria-like lesions, slightly erythematous and moderately edematous. They usually appeared six days before the menses, and disappeared about five or six days after menstruation.

When the eruption faded, a circinate patch of brownish pigmentation was left, suggesting a late syphilitic lesion. The cycle of the development of the lesions consisted of the development of erythema, edema and finally retrogression with pigmentation, which gradually disappeared. The eruption did not appear to be factitious.

Two Wassermann tests were negative. The general physical examination was entirely negative. She began to menstruate when she was 14 years old. Her periods occurred at twenty-eight day intervals and lasted four days. She did not have dysmenorrhea. She had one daughter, aged 18. She had had six miscarriages, all self-induced, according to the patient's statement.

DISCUSSION

DR. TOBIAS: This case appears to be one of dermatitis dysmenorrheica symmetrica described by Matzenauer and Polland in 1912. Wise and Parkhurst have recently reviewed the literature in the ARCHIVES OF DERMATOLOGY AND SYPHILOLOGY. Although the element of dysmenorrhea is slight in this case, the type and evolution of the lesions and their relation to menstruation all help to strengthen the diagnosis.

DR. STRYKER: Does the patient have dysmenorrhea?

DR. TOBIAS: No. She gives a normal gynecologic history. Two Wassermann tests were negative in spite of the lesions. Buckley described six cases in his literature. One was a typical case of a woman going to a gynecologic clinic for treatment. Both ovaries were diseased and removed, but in spite of this the disease continued.

DR. BROCKELMAN: I have never seen a case, but there are reports in the literature in the past six months—one in particular—of a young lady who went to a number of European clinics, and finally a gynecologist gave her some "Haw Substance" and the lesions immediately disappeared. In several months they reappeared, and after the same treatment they disappeared.

DR. GREINER: I saw a case with Dr. Kring, Dr. Happel calling us in consultation. About ten days before the menstrual periods, a "zosteroid" lesion would appear on the inner surface of the left thigh. As soon as the menstrual period was over, this lesion would disappear. I was unable to make a diagnosis, but after hearing this discussion, I believe it belongs to this type of case. The patient is coming in to see us again next month, and we shall follow up the case.

EFFECT OF RADIUM ON LUPUS ERYTHEMATOSUS. Presented by DR. CALHOUN.

J. G., a man, aged 35, had a disease that had lasted six years. It began in 1918 as a papule on the right side of the bridge of the nose. The condition spread slowly over the entire face and ears. The areas showed brownish pigment with gyrate margins—the centers were pink, dry and covered with many thin yellowish scales. The skin was thinned and atrophic, with some scarring. The patient was treated with radium.

DISCUSSION

DR. GRINDON: Over what period did your treatment extend?

DR. CALHOUN: The patient was given 25 and 50 mg. doses, depending on the sizes of the lesions, filtered with 1 mm. of lead. The last lesions treated on his face were given at 0.25 cm. distance, and the treatment was equally effective when applied right to the lesions, so that hereafter I shall use the distance of 0.25 cm. to reduce the erythema. This case is presented to show the effect of radium on lupus erythematosus.

MORPHEA. Presented by DR. GRINDON.

A white woman, married, a housewife, aged 45, had had no rheumatism or scarlatina. A cholecystectomy had been performed twenty years before. She had had no gastro-intestinal symptoms since. She did have constipation. She had had two normal deliveries and several induced abortions. The menses were regular and normal. Her general health was good.

Her tonsils were enlarged but not septic. She had recently had sphenoiditis, but was now much improved. She had several devitalized teeth. Roentgenograms showed no infection of the roots.

Over the right shoulder there was a patch of skin, 19 by 20 cm. in its longest diameter, densely infiltrated, depigmented, smooth and glistening, and there were two outlying patches, each 3 cm. in diameter, all bordered by an erythematous zone from 3 to 5 cm. wide.

Along the radial border of the right forearm, there was a band 16 cm. in length, of varying width, the maximum being 3.5 cm. with a surrounding erythematous zone less distinct than on the shoulder. The patches burn and itch when the patient is warm. Surrounding zones are not violaceous, but pink. They are not composed of visible vascular network, but of erythematous flesh.

The lesion on the arm was noticed three months before presentation, and the patch on the shoulder one month before. Probably, they had existed longer than these intervals.

DISCUSSION

Dr. Grindon: There is not much to say about this case, but it is evidently a well marked case of morphea, despite all efforts to find any possible cause.

A Case for Diagnosis. Presented by Dr. Richard Weiss.

L. W. H., a white youth, aged 16, noticed a disturbance of the skin for the first time in December, 1923. The first patch appeared at the end of the right clavicle, and the process spread slowly. There were no subjective sensations. The patches were distributed over the right shoulder, arm and chest. The patient presented groups of yellowish-red patches which showed only a slight thickening. There were dilated capillaries in the patches, and here and there a "cayenne pepper" point. The patches were irregularly circular and oval in shape, and several showed a circinate arrangement. The leukocyte count was 10,200. A differential count of 300 cells showed a moderate mononuclear increase and a moderate eosinophilia. There were: neutrophils, 46.7 per cent.; eosinophils, 5.3 per cent.; basophils, 0.3 per cent.; small lymphocytes, 39.3 per cent.; large lymphocytes, 3.0 per cent.; transitionals, 2.3 per cent., and large mononuclears, 3.0.

DISCUSSION

Dr. Davis: There are dilated papules, pigmentation and grouping which might place this in a definite class of mycosis.

Dr. Weiss: We will have a roentgenogram taken and a biopsy made and view this under the microscope.

A Case for Diagnosis. Presented by Dr. W. D. Davis.

A white youth, aged 19, single, presented himself at the outpatient department of the Barnard Free Skin and Cancer Hospital for treatment on April 2. The previous history, both family and personal, were negative except for the usual diseases of childhood. The present condition started two years before presentation, and first made its appearance on the thighs and buttocks as red blotches, and gradually spread to the trunk, arms, forearms, neck and face. There were a few lesions on the penis, but they had disappeared. Pruritus was absent except following a bath, and then there was only mild itching.

The eruption was discrete on the thighs and legs, but became more confluent as it moved upward on the trunk, arms, forearms, neck and face, and was most prominent over the posterior part of the trunk, arms, forearms, over the shoulders and on the neck. The lesions were slightly erythematous; some were fawn colored and scaly, the scales being minute, apparently not greasy

or of the silver asbestos character of psoriasis. There was a suggestion of a crinkling of the epidermis over some of the lesions. There was no capillary bleeding on removal of the scales.

The eruption had been present constantly since its beginning, and had been getting worse progressively, not being influenced by climate. The elbows and knees were free from the eruption, and on the scalp there was only a mild dandruff. There was a tendency for the seborrheic areas to be avoided. The plaques ranged in size from that of a pinhead to that of a silver quarter or larger.

DISCUSSION

DR. BROCKELMAN: The condition seems to me to be pityriasis rosea.

DR. STRYKER: I agree.

DR. CONRAD: I thought that it was parapsoriasis. I would not say what type.

DR. DAVIS: That was my diagnosis.

DR. GRINDON: I should call it parapsoriasis, but I should rather call it Brock's first type.

A CASE FOR DIAGNOSIS. Presented by DR. G. V. STRYKER.

A. R., a man, aged 20, an American, had an eruption that first appeared about two weeks previous to his admission to the clinic. It began on the lower part of the abdomen as small "spots." Examination revealed a distribution over the lower trunk, hips and thighs. The upper thorax and shoulders and arms were free. On the face, there were many dug-out, grouped, pinhead-sized lesions. Several groups of these lesions were discovered in the scalp. The lesions on the trunk and hips began as pinhead-sized, slightly elevated, of pink to purplish spots. There was also a tendency to grouping, and some presented a linear arrangement about the chest. The lesions became confluent and formed patches which varied from 0.05 cm. in diameter to large sheets which covered the lower one third of the abdomen and extended laterally over the hips. Located at intervals over these confluent areas were groups of pea-sized, thin walled vesicles. There was moderate pruritus.

No other subjective symptoms were present. The patient said that he did not have gonorrhea. He also denied having used any drugs. An attack of sore throat preceded the cutaneous symptoms.

DISCUSSION

DR. CALHOUN: I thought it was a case of erythema multiforme.

DR. BROCKELMAN: I thought it was erythema multiforme, although I could not explain the scaling.

DR. CONRAD: It looked like a typical drug eruption, irrespective of the history given.

DR. TOOMEY: I took it to be a toxic dermatitis, probably in group of erythema multiforme.

DR. GREINER: I believed it was a drug eruption—a toxic dermatitis of some form.

DR. TOBIAS: I thought it looked like a toxic eruption.

DR. GRINDON: I saw the case with Dr. Stryker, and after cross-examining the patient, I felt that he was telling the truth and was forced to the conclusion that it was caused by some other toxin—what I do not know. I do not understand why certain other toxins would not give the same appearance. It it erythema multiforme of some sort.

A CASE FOR DIAGNOSIS. Presented by DR. W. D. DAVIS.

A white boy, aged 6, gave a negative family history. The mother said that the child was vaccinated in October, 1922, and that he broke out with an eruption about two weeks later, which involved the face, ears and scalp. This eruption lasted about two months, and remained limited to the buttock and the posterior surface of the thighs (upper one-third), except for the recent appearance of a few grouped papules on the abdomen. The eruption consisted of grouped papules, some crusted and rather dug out from scratching. The pruritus was intense, and worse at night. There was evidence of previous lesions, as shown by the pigmentation, which was limited to the regions mentioned.

DISCUSSION

DR. DAVIS: I thought the condition was dermatitis herpetiformis, the lesions being entirely on the buttocks and thighs. The child was vaccinated in 1922. He broke out with an eruption about two weeks later. This lasted two months, and the child remained normal until October, 1923, when the present eruption made its appearance on the buttocks and thighs. Recently, a few papules appeared on the abdomen.

DR. GRINDON: I would suggest a diagnosis of dermatitis herpetiformis.

DR. KRING: I am inclined to look on the condition as one of postvaccinal eruptions, probably one of the postvaccinal pemphigus group.

DR. CONRAD: I believe that the history of vaccination should be left out altogether as having no bearing on the case.

A CASE FOR DIAGNOSIS. Presented by DR. T. J. CALHOUN.

J. D. M., aged 54, had had the disease about one year. It began on the right foot and leg as open sores that were pruritic. Later the condition appeared on the back, in the lumbar region, spreading from thence over the whole of body. He now had an eruption that was generalized and consisted of plaques varying in size from that of a coin to that of a palm. These plaques were raised distinctly above the surface and were covered with scales and crusts. They were hardened and infiltrated. The lesions on the hands and legs showed superficial fissuring. There was extreme pruritus at times.

DISCUSSION

DR. KRING: I believe it is mycosis fungoides.

DR. TOBIAS: Mycosis fungoides.

DR. CONRAD: At a recent meeting, we had a case diagnosed as mycosis fungoides which cleared up in two weeks after commencing to use sulphur. I feel that we cannot be too careful in making a diagnosis.

DR. GRINDON: Mycosis fungoides sometimes clears up without any treatment. I had a patient that became well by using Christian science.

PHILADELPHIA DERMATOLOGICAL SOCIETY

Regular Monthly Meeting, April 14, 1924

S. S. GREENBAUM, M.D., *Presiding*

PAPULONECROTIC TUBERCULID, ASSOCIATED WITH AN ERYTHEMA INDURATUM. Presented by DR. STRAUSS.

A woman, aged 30, was shown to the Society about three years ago as having a case of papulonecrotic tuberculid which had been treated by arsphenamin and cleared up entirely. During the course of the treatment, the condition often cleared, the eruption disappearing for several months. An erythema induratum developed on the legs. The lesions on the arms have not been active, with the exception of one or two new ones at intervals.

DISCUSSION

DR. SCHAMBERG remarked that the association of erythema induratum and papulonecrotic tuberculid was interesting, being confirmatory of the underlying etiologic factors in both conditions, and recalled a paper by Dr. Guy at the last meeting of the American Dermatological Association which purported to show that similar lesions could be produced by intestinal toxemias. This was confirmed by some experimental work on animals. He had three or four cases of erythema induratum under observation at the present time, and was not encouraged by the results of treatment with heavy filtered roentgen rays. The lesions had shown a tendency to break down and become painful. Dr. Schamberg further remarked that the treatment of erythema induratum left a great deal to be desired as far as successful therapy was concerned.

DR. KNOWLES said that the most successful treatment he had used in this condition was solution of potassium arsenite (Fowler's solution) internally and ammoniated mercury ointment locally.

DR. KLAUDER said that in his experience treatment with solution of potassium arsenite had been the most successful treatment.

DR. GREENBAUM referred to Darier's new third edition of his book recommending the term tuberculoid instead of the term tuberculid, thus indicating the type of structure but not the etiologic factors.

POIKILODERMA ATROPHICANS VASCULARE. Presented by DR. KLAUDER.

A woman, aged 31, born in America, had a condition that first appeared on the back of the neck about five years before and which had since extended until now the entire neck, the upper portion of the chest, the shoulders and the arms, almost down to the elbows, and most of the back, were the sites of the disease. There had been no recent progress.

One's first impression of the disease was that it was an old radiodermatitis. The condition consisted of pigmentation, some areas of atrophy, dilated capillaries and tiny bright red puncta. On the arms, the appearance was mostly pigmentation with clear areas of skin producing a mottling, somewhat resembling leukoderma, except that it was much more pronounced. On the back and chest, the same appearance was presented, together with dilated capillaries

and bright red puncta, with possibly some atrophy of the skin here and there. The condition was most pronounced on back of the neck; here there were distinct linear areas of atrophy.

The patient had never been treated with radium or the roentgen ray. The general health was good. There was no itching. She said that the disease was worse at the time of the menstrual period as the redness of the eruption was increased at that time. According to the patient, her sister had had the same disease in the same location for eight years. (Her sister lived in a distant city and was therefore not examined.)

Treatment was prescribed one month before presentation and consisted of the application of a calamin lotion and the following in the form of a capsule administered three times daily: Extract of suprarenal gland, 1½ grains (0.09 gm.); ferrous carbonate, 2 grains (0.13 gm.); arsenious acid, one-thirtieth of a grain (0.002 gm.). Although entirely unexpected, there had been definite improvement; the pigmentation and capillary dilatation were less pronounced. The patient said that the condition was better now than it had ever been.

DISCUSSION

DR. SCHAMBERG said that he considered the case interesting and difficult to classify. He said that it was possible that Dr. Klauder's original thought might be correct, that it was a form of incipient purpura annularis telangiectodes. The patient showed dilatation of the capillaries which evidently varied in degree from time to time, associated with some pigmentation, and, what was remarkable, distinct areas of linear atrophy on the back of her neck. The condition suggested a possible toxic factor acting on the blood vessels.

RECURRING ULCERATIONS IN THE MOUTH. Presented by DR. KLAUDER.

A woman, aged 35, at intervals during the past fifteen years had experienced recurring aphtha-like ulcerations of the mucous membrane, at times as many as eight or ten. These were most likely to appear at the menstrual period. At this time, she presented three such ulcerations, which were superficial, with a yellow surface surrounded by an inflammatory halo. The ulcerations were painful. There had been some improvement following treatment directed at the gastro-intestinal tract. It was proposed to make cultures of the lesions and to administer an autogenous vaccine. With this method of treatment, good results have been obtained in similar cases.

DISCUSSION

DR. SCHAMBERG said that the condition seemed to him to be due to one of two causes—it was either of gastro-intestinal origin, or it was due to mouth bacteria. Some light might be thrown on successful therapy by making smears and cultures of the ulcerated areas. Dr. Schamberg said he thought that local treatment should not be overlooked and might be a marked factor in the cure. He referred to a recent case in which a patient with recurring ulcerative lesions in the mouth recovered under the use of vaccines and an antiseptic mouth wash. After an interval of seven months the condition recurred.

MULTIPLE BENIGN SARCOID (Boeck). Presented by DR. KLAUDER.

A man, aged 22, born in America, had, on his face, both shoulders and extensor surface of the left forearm, numerous yellowish brown, round nodules, variable in size. On palpation, they were elastic. Scars, the result of involu-

tion of similar lesions, were also present. The duration was two years. The patient said the lesions appeared soon after he was poisoned by ammonia fumes. His general health was good.

One lesion, studied microscopically, disclosed throughout the entire corium the marked presence of connective tissue; the interpapillary prolongations were obliterated. A cellular infiltration, composed chiefly of epitheloid connective tissue cells and numerous giant cells, was present.

Appreciable improvement of some of the lesions and the disappearance of a few followed the administration of potassium arsenite solution over a period of two months. If the improvement is not progressive, the lesions will be destroyed by electrocoagulation.

DISCUSSION

DR. KNOWLES said that he thought it would be quite difficult to make a clinical diagnosis between lupus vulgaris and Boeck's sarcoid.

DR. SCHAMBERG said that he definitely endorsed the diagnosis of sarcoid made by Dr. Klauder. He said he thought it would be interesting to determine whether a successful innoculation of a guinea-pig could be induced.

PARAPSORIASIS. Presented by DR. KLAUDER.

A man, aged 35, presented generalized erythematous scaly patches, some of which had become confluent. The lesions were bright red, inflammatory, non-infiltrated, severely pruritic. Some of the patches had a moist surface, eczematous in appearance; others were discoid patches of erythroderma. The scalp, palms and soles were the only areas free from the eruption. The duration had been eight months.

DISCUSSION

DR. SCHAMBERG said that in its present condition this case did not conform with the symptoms of parapsoriasis. The degree of inflammation was too great for that; the amount of itching, the character of scaling and the absence of any atrophy or pigmentation were against such a diagnosis. He regarded the case as one of eczema.

DR. KNOWLES said he thought that in this case the possibility of a mycosis fungoides should be considered.

PATRICIA HART-DRAUT, Secretary.

DETROIT DERMATOLOGICAL SOCIETY

Regular Meeting, April 15, 1924

R. C. JAMIESON, M.D., *Presiding*

TRICHOPHYTOSIS OF THE SCALP AND FACE. Presented by DRS. SCHILLER and PERKINS.

Four colored children, members of the same family and all under puberty, presented diversified pictures of ringworm infection of the scalp and face.

DISCUSSION

DR. WOLLENBERG asked whether the causative organism had been isolated.

DR. PERKINS replied that it had not been isolated as yet, but that the rapid response to treatment seemed to indicate that it was not of the small spore type.

ERYTHEMA IRIS, RECURRENT. Presented by DR. JAMIESON.

J. D., a boy, aged 9, born in America, had had the ordinary diseases of childhood. About three years previously a transient generalized erythematobullous eruption had appeared. Since that time there had been about thirty recurrences of this outbreak, at intervals of from four to six weeks, each attack being preceded by slight malaise. At the time of presentation, the lesions were of about one week's duration, having begun as erythematous macules which had later become slightly elevated, with the formation of bullae. In some locations, such as the dorsa of the hands, they assumed an iris type, being from 1 to 3 cm. in diameter. The buccal mucosa was involved.

DISCUSSION

DR. BREITENBACH said that the tonsils were purulent, and might be the source of the trouble in this case.

DR. WOLLENBERG said that focal infection was present in the large majority of cases of this type. He felt that the infected tonsils should be removed.

DR. JAMIESON said that in cases of repeated outbreak, in which no focus of infection could be found, he had successfully used a mixed vaccine of streptococcus, staphylococcus and colon bacilli.

DR. BREITENBACH said that he had recently seen a case of erythema multiforme which persisted until the intestinal flora was altered.

DERMATITIS VENENATA. Presented by DRS. SCHILLER and PERKINS.

Mary I., aged 5, of Polish birth, had had a diffuse dry erythematosquamous eruption on both cheeks for five years. Similar patches had appeared on the arms during the previous four or five days.

DISCUSSION

DR. PARKHURST said that more than one factor was apparently causative in this case. There was irritation due to the presence of pediculosis capitis, and since the father had a slight dermatitis on his face also, it was possible that an irritating soap had been used. Furthermore, the tonsils were infected.

DR. WOLLENBERG said that in his experience Palm Olive and Lifebuoy soaps were the most frequent irritating factors.

DR. MURRAY said that it appeared to be a low-grade inflammatory condition. He felt that the pediculosis capitis was a condition of long standing, which had nothing to do with the dermatitis.

PRURIGO MITIS. Presented by DRS. SCHILLER and PERKINS.

A child, aged 7, had had occasional generalized outbreaks of pruritic papules, especially on the arms and legs, since infancy. The last attack had followed vaccination, two months previously, and active lesions were still present.

DISCUSSION

DRS. PARKHURST, MURRAY and WOLLENBERG agreed with the diagnosis.

URTICARIA PIGMENTOSA. Presented by DR. VAN RHEE.

A male infant, aged 10 months, had had an eruption since birth. The eruption consisted of small brown macules of various sizes and shapes, the scalp, face, trunk and extremities being affected and the lesions being numerous. When the macules were gently rubbed they gave rise to wheals.

A CASE FOR DIAGNOSIS. Presented by DR. VAN RHEE.

F. B., aged 45, a machinist, was cut while at work by a piece of metal which penetrated his right hand. The skin surrounding the wound soon became red and itched, and within two weeks a generalized dermatitis had developed. with large coin-sized erythematosquamous patches, sharply outlined, on the trunk, and a confluent erythematosquamous eruption on the extremities and face. At the time of presentation, there had been some improvement.

DISCUSSION

DR. PARKHURST said that apparently more than one condition was present, the primary condition being perhaps an infectious eczematoid dermatitis from the infected wound, which had subsequently healed, or perhaps a phenolphthalein eruption or parapsoriasis en plaques, as suggested by the appearance of the patches on the trunk. Irritation and possibly infection of the skin due to contact with the cutting mixture used in the patient's trade may have been a factor. There was a severe seborrheic dermatitis, probably secondary, and there may have been also a secondary dermatitis venenata due to local applications.

DR. BARTHOLOMEW said that this was a case of beginning dermatitis exfoliativa, the involvement of the axillae being characteristic.

DR. WANDER said that the condition apparently had started with the injury to the hand, from which time antiseptic tablets had been used. Therefore the eruption was possibly all due to external applications.

DR. PARKHURST said that the isolated patches on the trunk seemed too sharply circumscribed to be due to external applications.

DR. WOLLENBERG suggested that a complete physical examination be done and internal factors investigated. It was possible that the original trouble might have been an old seborrhea of the scalp, and therefore a paste or lotion containing 1 or 2 per cent. of resorcinol and salicylic acid should be tried

A CASE FOR DIAGNOSIS. Presented by DR. VAN RHEE.

F. R., aged 69, a Pole, had first noticed itching of the right foot a few days previously. Erythema appeared, and bullae soon formed, the foot being swollen and painful. An ointment containing turpentine had been used. There was a faint trace of sugar in the urine.

DISCUSSION

DR. BARTHOLOMEW said that it was probably a trophic condition plus dermatitis venenata.

H. J. PARKHURST, Reporter.

PITTSBURGH DERMATOLOGICAL SOCIETY

Annual Meeting, April 17, 1924.

STANLEY CRAWFORD, M.D., *Presiding.*

MULTIPLE CHANCRES. Presented by DRS. SCHWARTZ and BUSMAN.

M. H., aged 18, married, a housewife, presented on the labiae majorae and upper inner aspect of the left thigh five sharply defined, punched out, infiltrated erosions with elevated borders, which looked as though a caustic had been applied. A serosanguineous discharge was present. The left labia was edematous, and there was enlargement of the left inguinal glands. The lesions were of four weeks' duration. The blood Wassermann test was positive. All lesions had improved under intravenous injections of arsphenamin.

DISCUSSION

DR. WILE said that he seldom saw a chancre on the external genitalia in the female. A chancre was often found on the cervix. The vaginal mucosa was seldom attacked.

DR. PAROUNAGIAN said he had examined this case carefully, and he agreed that all the lesions were indurated and were chancres. He likewise said that that he had seen many chancres in the female, but only recently had he noted a double labial chancre in this sex.

DR. WALLENBERG asked whether any cautery had been used, because the lesions looked so punched out.

DR. BUSMAN said that the case had been referred to them with a positive Wassermann test, and therefore no dark-field examination had been made. All the lesions were palpably indurated, and had shown the same rapid involution to two intravenous arsphenamin injections. To his knowledge, no cautery had been used, but some local disinfectant had been applied.

POIKILODERMA ATROPHICANS VASCULARE. Presented by DR. HOLLANDER.

L. E., a woman, aged 33, colored, presented on the face, neck, arms and hands a diffuse, striated atrophy of the skin with a large number of telangiactasia and areas of hyperpigmentation and depigmentation. The entire area had the appearance of a roentgen-ray burn. There were no subjective symptoms, and the blood Wassermann test was negative. The condition began twelve years before on the face.

DISCUSSION

DR. WILE said that he was not so sure of the diagnosis of poikiloderma atrophicans vasculare. There was a marked resemblance to anetoderma, and the definite telangiectasia seen in the former disease was not discernible in this case.

DR. HOLLANDER said that he agreed with Dr. Wile and that he would be glad to follow any suggestions.

MULTIPLE BENIGN EPITHELIOMA. Presented by DR. WERTHEIMER.

Mrs. F. D., a negress, aged 32, presented on the middle of the face numerous pinhead sized, closely set, somewhat firm, skin colored tumors. A few lesions were present on the vulva. They had been present since birth and without subjective symptoms.

DISCUSSION

DR. WILE said that he was not particularly familiar with dermatoses in the colored race, but he could not differentiate clinically between multiple benign epithelioma and adenoma sebaceum in this case. His impression was that multiple benign epithelioma was not so profuse, and that there was more telangiectases. It would be well to obtain a biopsy.

DR. JAMIESON said that he thought, judging by the history, that adenoma sebaceum was the more likely diagnosis.

DR. WERTHEIMER said that he had repeatedly sought to obtain a biopsy without success. Realizing the difficulty in making a diagnosis without a biopsy, he had favored the diagnosis as presented because of the lack of telangiectases.

EPITHELIOMA. Presented by DRS. SCHWARTZ and BUSMAN.

I. C. H., a man, aged 47, single, presented a diffuse atrophy with telangiectasis of the chest, abdomen and back. Scattered throughout were several various sized, reddish, slightly scaly lesions, some of which showed a definite pearly border. The lateral surfaces of the trunk, arms and legs were covered with several typical psoriatic lesions. The palms and soles showed small, raised, warty keratoses. The blood Wassermann test was negative. There was a definite family history of psoriasis, the onset of the disease in the patient occurring in early childhood. Former treatment consisted of intensive roentgen-ray treatment and arsenic. Biopsy from a small lesion on the back showed basal cell epithelioma.

DISCUSSION

DR. WILE said it seemed to him that the patient had more than psoriasis and that this case was similar to another case presented in that most lesions over the chest and back appeared to be superficial epitheliomas of the Bowen type.

DR. GREENBAUM said that he did not think that this case should be passed by without speaking about the use of the roentgen ray in psoriasis. He believed the roentgen ray had a limited use in the treatment of psoriasis, and it should not be used indiscreetly as the results in this case showed.

DR. ZWICK asked whether any one had had any success in treating psoriasis by irradiation of the thymus gland?

DR. HOLLANDER said that he had never seen a case of psoriasis in which the thymus could be demonstrated.

DR. JAMIESON said that he had treated a few cases by irradiating the thymus, and had given thymus extract internally. Most of the patients improved temporarily, only to have a relapse, but later showed a fairly definite, more permanent improvement.

Dr. Zwick said that Dr. Jamieson's remarks and Dr. Hollander's observation spoke in favor of irradiating the thymus. No thymus being present, it would mean a decrease in secretions, and therefore stimulating doses of roentgen ray would be beneficial.

Dr. Hollander said that it was normal to find an atrophic thymus in the adult.

Dr. Driver said he agreed with Dr. Wile that some of the lesions were superficial epitheliomas.

Acnitis. Presented by Drs. Guy and Jacob.

A colored man, aged 24, presented a generalized papular eruption of nine weeks' duration. The lesions first appeared on the face as hard shiny papules; the body became involved one month later, and the lesions became covered with scales. Itching was never a prominent symptom. At the time of presentation the lesions on the face were shining, angular papules, with a tendency toward slight scale formation and central depression. There were several similar papules on the glans penis. Removal of scales revealed a smooth nonexudative papular base on the body. The blood Wassermann test and therapeutic tests were negative. Biopsy showed slight hyperkeratosis and acanthosis, a fairly large cellular exudate in the corium; lymphocytes and plasma cells. Deep in the corium, there were circumscribed masses of epithelioid cells suggestive of tubercle formation.

DISCUSSION

Dr. Wile said that he considered it a most interesting case, and he felt that there was considerable confusion in the use of the terms acnitis and miliary lupus. The diagnosis must be made, he said, from a section that showed a perifollicular tubercle formation.

Dr. Parkhurst said that he thought it was a lichen scrofulosorum.

Dr. Zwick said that the conditions were all of tuberculous origin, and that the terminology was not the primary consideration.

Glossitis. Presented by Dr. Hollander.

A glass blower, aged 55, had had pernicious anemia and presented on the anterior two thirds of his tongue a denuded area in which the papillae were hypertrophied. The condition had been present two years.

DISCUSSION

Dr. Wile said that he regarded this as a case of typical pernicious anemia with characteristic mouth lesions. He said that he saw many cases of this type associated with burning sensations. He felt that achlorhydria, which is common in pernicious anemia, may account for the mouth lesions.

Hydroa Vacciniforme. Presented by Drs. Schwartz and Busman.

B. D., a girl, aged 9, American, presented on the face, arms, limbs and back numerous pinhead-sized, bluish-red papules, with central crusting and much scarring. The condition had been present for four years, and was always worse during the spring months.

DISCUSSION

Dr. Hollander said that he considered the condition papulonecrotic tuberculid.

Dr. Wile said that he agreed with Dr. Hollander.

Dr. Phillips said that there were lesions on the back, a location in which hydroavacciniforme did not occur; there were no lesions on the ears, a site so common for this disease.

Dr. Jamieson said that he thought the condition was papulonecrotic tuberculid.

Dr. Wertheimer said that he saw this case about two or three years before, at which time he made a diagnosis of papulonecrotic tuberculid.

Cheilitis Exfoliativa. Presented by Dr. Hollander.

K. R., a man, aged 35, a machinist, for the past five years had presented a red, scaly and crusted condition of the lower lip. The border of the lesions, especially on the vermilion surface, showed whitish-gray, hypertrophic nodules.

DISCUSSION

Dr. Parkhurst said that inspection of the mucous membranes of the lip showed pinpoint-sized lesions exuding serum, suggesting cheilitis glandularis apostematosa.

Nevus Lipomatodes. Presented by Dr. Wertheimer.

T. S., a girl, aged 7, presented on the external surface of the right forearm four lesions varying in size from that of a cherry to that of a pea, which were smooth, soft, skin colored, pinkish tumors containing comedones. The tumors had been present since birth.

DISCUSSION

Dr. Wertheimer said that the case was unusual because of the large number of comedones in the tumors.

Favus. Presented by Drs. Guy and Jacob.

A girl, aged 15, presented an area of cicatricial alopecia about 6 inches (15 cm.) in diameter, centering near the vertex of the scalp. At the edges and studded over the almost completely depilated surface were crusted oozing follicular lesions. Typical sulphur yellow crusts were lacking, but a "mousy" odor was quite evident. *Achorion* was demonstrated by the direct method.

DISCUSSION

Dr. Zwick said that he thought the case was most interesting in that it occurred in a native-born American, a condition considered a rarity.

Paget's Disease. Presented by Drs. Schwartz and Busman.

Mrs. S., aged 73, a housewife, presented an irregularly, round, hen's egg sized, red, scaly, oozing and infiltrated plaque over the left breast, with disappearance of the nipple. The condition originally covered the entire breast,

but it had healed to the present size, following an exposure to the roentgen ray. Biopsy showed a typical picture of Paget's disease. The condition was of eight years' duration.

DISCUSSION

DR. HOLLANDER suggested surgical intervention as quickly as possible.

DR. BUSMAN said that he had the patient examined by two surgeons, who advised against operation because of the patient's age and the apparent lack of involvement of the deeper tissues.

ERYTHEMATOID BENIGN EPITHELIOMA. Presented by DR. CRAWFORD.

J. M. C., aged 52, a glassworker, had had a marked seborrhea of the scalp and face for many years. The face showed a patchy seborrheic dermatitis of a dry character, and the skin was thin and showed many small telangiectases. Beneath the outer end of the right clavicle, he presented a round, red lesion 2.5 cm. in diameter. This lesion had a narrow, slightly raised and rolling rim, which enclosed a dry, red, slightly depressed and seemingly atrophic area. This lesion was of two years' duration. Over the lower end of the sternum was a like but smaller lesion of ten years' duration. There was another over the right scapula about 2 cm. in diameter.

DISCUSSION

DR. WILE said that he considered the title a misnomer, and he felt that it was wrong to call such a lesion a benign epithelioma. He said that an epithelioma was cancer, and that as such it should not be referred to as a benign growth.

DR. CRAWFORD said that he agreed with Dr. Wile's remarks regarding the terminology of this condition.

SPOROTRICHOSIS (?). Presented by DR. CRAWFORD.

W. M., aged 25, an American, a mail-carrier, had lacerated his left ankle five months before with a shoe-string. The ankle became swollen, and after five days, the lesion discharged a great amount of pus. Along one side of this lesion, the skin became puffy and purplish, and soon discharged here and there from small sinuses a thin, yellow serum. The entire lesion was roughly crescentic and measured 13 by 8 cm. The thin seropus had a granular character. *Sporotrichium* was not grown on several medium implants with the pus. The blood Wassermann test was negative.

DISCUSSION

DR. WILE asked whether the sporothrix had been demonstrated.

DR. JACOB said the history was not typical, and that because there was inflammation at first the condition was not like a sporotrichosis.

DR. GREENBAUM said that the sporothrix was easily cultured, while the actinomyces was difficult. He agreed that it probably was a fungus infection.

DR. CRAWFORD said that several cultures failed to grow any fungus. He felt that clinically the case resembled somewhat both sporotrichosis and actinomycosis, and that the condition had greatly improved under treatment with potassium iodid.

ANGIOMA (MALIGNANT?). Presented by DR. CRAWFORD.

S. N., a man, aged 40, had had since birth a bluish angioma on the right leg anteriorly, about 4 inches (10 cm.) above the ankle. The lesion was 2 cm. in diameter and was raised 1 cm. It was a deep brownish blue, and it felt rather solid to the touch. The surface was covered with a hard keratinized layer. Two years previously, he had bruised the lesion, and it had since become harder and firmer and slightly fuller in appearance. It was probable that there were malignant changes.

DISCUSSION

DR. WERTHEIMER said that he believed it was a malignant lesion, probably sarcoma.

DR. PARKHURST and DR. WOLLENBERG said that they considered the condition an angiosarcoma.

BROMID ERUPTION. Presented by DRS. GUY and JACOB.

A baby, aged 15 months, presented an eruption of two weeks' duration, limited to the cheeks. The lesions varied in size from that of a split pea to that of a bean. There were discrete and confluent inflammatory nodules with a mulberry-like surface studded with pinpoint abscesses. The child had received a mixture for whooping cough that contained sodium bromid.

DISCUSSION

DR. GUY said that although it was not customary for the presenter to speak first, he wished to refer to Dr. Wile as the originator of the method of treatment used in these cases.

DR. WILE gave a thorough discussion on the rationale of the treatment of bromoderma by intravenous sodium chlorid injection.

H. G. WERTHEIMER, M.D., Secretary.

NEW YORK DERMATOLOGICAL SOCIETY

Regular Meeting, April 22, 1924

WALTER J. HIGHMAN, M.D., *President*

PITYRIASIS RUBRA PILARIS. Presented by DR. CLARK.

G. McD., a man, aged 26, born in the United States, an armature winder, thirteen years before presentation began to have a prickly heat-like eruption on the upper arms and eyelids. This persisted, spread slowly over the extremities and later over the body. When first seen, he presented a bright red, thick, infiltrated condition of the skin, with a generalized exfoliation. There were numerous keratotic plugs on the backs of the fingers, and there was a well marked hyperkeratosis of the palms and soles. The patient appeared to be in good general health, and had never lost a day's work.

DISCUSSION

DR. CLARK said that there had been some change in the condition since the patient had been using a large amount of hydrous wool fat on his body, and 12 per cent. salicylic acid in diachylon ointment on his hands. On the backs of the hands and on the knees, there had been marked keratoses, which had been greatly improved. The history of the disease dated back thirteen years, the lesions appearing first on the arms and eyelids, rather like prickly heat, which he said never disappeared and seemed to spread. After careful consideration, he had unreservedly made the diagnosis of pityriasis rubra pilaris.

DR. WISE said that the absence of hyperkeratosis on the palms and soles was against the diagnosis, but as that had been marked and had disappeared under treatment, as Dr. Clark explained, he concurred in the diagnosis—at least tentatively.

DR. WHITEHOUSE said that he was sorry he had not presented a case from the ward at the Skin and Cancer Hospital, a patient with a pityriasis rubra pilaris of thirty-five years' duration. He had seen her at that time and recognized her today. The condition was entirely different from what it was thirty-five years before. She had none of the keratotic plugs she had then, but on the face and generalized over the body the picture of the condition was much the same as that of this patient. The two cases seemed to be of the same nature, and he agreed with the diagnosis. It was most instructive to present these cases early and late in their history, and to observe how they change. This man, some years ago, might have had the keratotic plugs, as his patient had.

DR. TRIMBLE expressed his agreement with what Dr. Wise had said. The fact that the man had so much telangiectasia would seem to be against the diagnosis of pityriasis rubra pilaris, also the fact that it was so brilliantly red. Most patients with this disease have a marked pityriasis capitis, which this man did not have. He was willing, however, to accept the diagnosis with reservations.

DR. SCHWARTZ said that he agreed with what had been said by Dr. Wise and Dr. Trimble. He had never seen a case of pityriasis rubra pilaris with such extensive telangiectasia.

DR. HIGHMAN said that he thought the outstanding features of the case, aside from the condition of the hands, suggested pityriasis rubra pilaris, but there were telangiectasia and papules like those of lichen planus. He did not know that this picture had been described in the literature. In working up the case, Dr. Clark would probably find that he had a variant of pityriasis rubra pilaris, if not an entirely new condition.

DR. CLARK said that he had had an opportunity in the clinic of studying this patient side by side with one who had an old and marked case of angioma serpiginosum, and the cases were very different in type. There were some angiomas, but in good daylight there were not nearly as many as most of the physicians seemed to have found at this meeting. The man had marked erythroderma, which was not unusual in pityriasis rubra pilaris. Dr. Clark said that he had seen only a few cases, but he had observed some of long duration, and in all there had been some telangiectasia. The lesions on the backs of the man's fingers, on his soles and palms, and around the back of the neck had been much more characteristic than they were at present. The man had been treated with an enormous amount of hydrous wool fat, at least a pound a week, and besides that, with intensive rubbing with 12 per cent. salicylic acid in diachylon ointment, and it had changed the keratotic element

very much. After comparing him side by side with the patient with angioma serpiginosum, the diagnosis of pityriasis rubra pilaris seemed more likely to be the correct one.

Dr. Whitehouse said that he would like Dr. Clark to compare this case with that of a woman patient of his with pityriasis rubra pilaris of thirty-five years' standing. It would be interesting to see the two cases together, and he would find the similarity most marked. The condition resembled pityriasis rubra more than it did angioma serpiginosum.

Dr. Clark replied that he had seen Dr. Whitehouse's patient, and after putting this case side by side with the case of angioma serpiginosum, he had unqualifiedly made the diagnosis to which Dr. Wise took exception.

Dr. Wise said that the presence of widespread telangiectasia made it doubtful that the eruption was one of pityriasis rubra pilaris, and that he could not unreservedly accept that diagnosis. He said, also, that the dilated blood vessels resembled the picture seen in angioma serpiginosum, but that the presence of scaling and infiltration in this patient precluded the diagnosis of angioma serpiginosum.

Poikiloderma. Presented by Dr. Whitehouse.

The patient, previously shown, a woman, aged 34, had had the condition for thirteen or fourteen years. He had not seen her for some time until tonight, as she lived in New Jersey. She said that she was now receiving roentgen-ray treatment in Trenton, which from her appearance was apparently doing her harm. In fact her condition had been very much changed by the roentgen-ray treatment. He had asked the woman to come again, so that he could see her in daylight, and try to effect the discontinuance of the roentgen-ray treatment. The histopathologic report was practically the same as that of the young girl. He would try to keep the Society informed of the further progress of the cases.

DISCUSSION

Dr. Lane said that there was no doubt of the correctness of the diagnosis. The case had advanced considerably since last shown, and very much resembled that of the patient he had had previously. He would not be surprised to see some ulcerations appear in this case later. The patient had received some roentgen-ray treatment, which seemed to him to be an extremely risky procedure on a skin that was both atrophic and vascular. There was much more scaling in this case than was usually seen. He could not say to what that was due.

Poikiloderma (Well Developed). Presented by Dr. Whitehouse.

An Italian girl, aged 13, said that the condition began about two years before. It was preceded by yellowness of the cuticle for six months. Desquamation started six months before presentation, after the patient had taken arsenic for a week, and when first seen she had an exfoliative dermatitis caused by the arsenic, so that the diagnosis could not then be made. When that cleared up, symptoms of poikiloderma were revealed—telangiectasia, reticulation, atrophy, pigmentation—and an area on the scalp behind the left ear had the appearance of a typical roentgen-ray burn, showing atrophic skin, rather scarlike in texture, with telangiectasia. The condition involved particularly the extensor surfaces, the face, the buttocks, and the body, with an additional symptom of leukonychia of the finger nails, and a passive hyperemia, including injection of the conjunctivae. Dr. Lane, who saw the patient in

New Haven, found a systolic murmur at the apex and base which was not present when she was examined by our internist in the clinic; but she had a pulmonary second sound louder than the aortic second and vasomotor disturbance, which would probably account for her vagotonia and passive hyperemia, independent of the poikiloderma. The patient had developed quickly into womanhood, and the vascular disturbances were well marked. She was in good general condition, but had all the clinical symptoms of poikiloderma. The internist spoke about endocrins, hypothyroidism, because she had a slightly swollen thyroid on one side, etc., hypogonadism and hypopituitarism, as she had dysmenorrhea, headache and irregular menstrual disturbances, which began at 11. He had also spoken of hypo-adrenalism, because she had some pigmentation, vagatonia and poor vasomotor control, all of which seemed rather questionable; but the symptoms of poikiloderma were distinct.

DISCUSSION

DR. WHITEHOUSE said that he was glad to be able to present these two cases in conjunction—one in a woman, aged 34, who had had the condition for thirteen years, and the other, of only two years' duration, in a young girl. Both had negative Wassermann reactions, and the biopsies in both cases showed practically the same picture, namely: marked acanthosis with papillary prolongations of the derma, which reached almost to the horny layer and which showed increased vascularity with some small round cell infiltration, which was also present in the superficial derma. There was some pigment in these regions. The stratum granulosum was prominent, and there was some parakeratosis with moderate hyperkeratosis. The pathologist's report on the condition of the girl showed the blood sugar to be 83 mg., which was normal, uric acid 4.6, while 3 was the normal high, urea nitrogen 11.3 mg. (normal). The blood picture was: red blood cells, 5,000,000; white blood cells, 7,000; polymorphonuclears, 60 per cent.; lymphocytes, 40 per cent.; hemoglobin, 70 per cent. The tuberculin test was negative in four dilutions.

In the other case of poikiloderma which Dr. Whitehouse had presented before the New England Society, there was a high uric acid content, and Dr. Schamberg, in discussing the case, said that he believed it was a toxemia, and that was probably a contributing factor, but not the main etiologic factor.

DR. LANE said that he had seen the girl in January, and had reported to the physician who sent her because he thought it was probably poikiloderma, possibly an angioma serpiginosum. The patient had been taking arsenic and cacodylate of soda injections when he had seen her. She had no arsenic dermatitis at that time. It seemed that this was a case of poikiloderma—the lesions back of the ear and on the back of the chest were typical. The pigmentation seemed rather streaky in spots, rather than reticulated, but that was possibly due to the arsenic, as that arrangement of pigmentation was not present when he saw her.

DR. WHITEHOUSE said that there was no doubt about the diagnosis. He did not know whether the members had examined the lesion back of the ear. The older woman did not show the characteristic roentgen-ray burn appearance that the younger did, behind the ear and on the scalp, with depigmentation and telangiectasia like a roentgen-ray burn. The younger woman had received no roentgen-ray treatment, and that feature, together with the histopathologic study, which was the same as in the older case, were contributory circumstances to prove that the two were of the same nature. He would try to follow both cases and to report them later.

DISCOID LUPUS ERYTHEMATOSUS. Presented by DR. HIGHMAN.

L. S., a man, aged 46, a Pole, a painter, said that the condition began five years before on the left side of the nose. The Kromayer light had been used with varying degrees of success, the condition showing improvement at times and then flaring up again. On March 14, on the basis of the work that Dr. Fordyce and Dr. Cannon had been doing, a Moro test with tuberculin salve was made, the cream being rubbed in on the right side of the neck and over one of the lesions, as well as on two areas on the chest. In forty-eight hours, there was a marked Moro reaction that first looked like lichen scrofulosorum but later assumed the character of lupus erythematosus. On April 11, tuberculin injections were instituted, beginning with 0.2 mg. of a solution of 1:10,000 every five days, and resulting in an amazing improvement in the lesions.

The case was presented, first, because of the apparent improvement; and second, on account of the effect of the tuberculin injections.

DISCUSSION

DR. WILLIAMS said that if one is going to treat any tuberculosis or tuberculid with Alpine sun or any other light treatment, it should be general and not local.

DR. TRIMBLE said that he had had some experience with the Moro ointment test. He had tried it in a series of ten cases of erythematosus lupus, and it had been negative in all but two. He had never seen it act as in this case, benefiting the lesions. Although the improvement seemed marked and was probably due to the therapy employed, it should be remembered that lupus erythematosus was a curious disease and was benefited by many different forms of treatment; some patients were benefited by lotio alba, or sulphur, or Kromayer light; so that it was difficult to say whether the improvement would be permanent or transitory. He had also been of the opinion that the lupus erythematosus was not tuberculous, although it was possible that he might have to change his mind.

DR. HIGHMAN said that he had not meant to give the impression that using the salve locally improved the lesions; he had said it was simply a test, and that the patient was improved by tuberculin injections. He was inclined to agree with what Dr. Trimble had said about the effect of any therapy on lupus erythematosus, except that in this case all the others had been applied without avail, and the improvement was striking after the injections of tuberculin, after a year of observation in which nothing else had been of any avail.

DR. CLARK said that he felt so strongly about the question of tuberculosis in these cases of lupus erythematosus that he could not let the matter go unchallenged. As he had said before to this Society when in the old days he used the ophthalmotuberculin test, which was extremely sensitive, he had about eleven cases that were negative to the test. The test was so sensitive that it had to be given up in any patient who had tuberculosis; and the work that he and Dr. Throne had done during the last three years with lupus erythematosus, principally at the New York Skin and Cancer Hospital, more or less confirmed that. Chronic tuberculous lesions of the skin had all regularly shown a positive tuberculin fixation test; whereas a great many cases of lupus erythematosus had been negative. The test was a much more valuable one than the Pirquet or Moro test for tuberculosis. In his opinion, tuberculosis was a toxemia, probably of protein origin, and if tuberculin helped lupus erythema-

tosus, typhoid vaccines would probably duplicate the result shown by Dr. Highman, so that he could not feel that the improvement shown in this one case meant a great deal.

Dr. Williams said that the most remarkable part of Dr. Clark's remark was that he had eleven cases that were negative to the Calmette test, when we expect 80 per cent. to be positive. If he had eleven cases that were all negative, there must have been something wrong in the test.

Dr. Highman said that his early dermatologic training was in a school that believed in the identity of lupus erythematosus with tuberculosis, but that he did not. In his opinion lupus erythematosus was a skin reaction, though in a sense he agreed with McLeod's outline of the subject at the last American Dermatological Association meeting, in which he said approximately that he had no doubt that many cases were due to tuberculosis, although the proportion of such cases might be small. Dr. Highman said that he did not like to presume on the work that Dr. Fordyce and Dr. Cannon had been doing, but Dr. Fordyce referred to it at the same meeting, and said that many cases had proved to be tuberculous by both animal inoculations and histologic studies, so that he had tried tuberculin treatment in this case as a last resort, with the result shown. He was not claiming a tuberculous origin for all cases of lupus erythematosus, for he had seen many cases in which such a view would not be tenable.

Referring to Dr. Williams' criticism of the investigations alluded to by Dr. Clark, he said that it was almost inconceivable that eleven consecutive cases should have proved negative to the tuberculin injection, and for that reason the work should be checked up.

Dr. Clark said that he could not believe that Dr. Williams' statement that 80 per cent. of all people in the world showed a positive tuberculous reaction would hold.

Dr. Whitehouse said that Dr. Throne's recent statistics showed that 13 per cent. of all supposedly healthy persons gave a positive tuberculin fixation test, and he agreed with Dr. Highman that lupus erythematosus was not of tuberculous etiology, although in some cases tuberculosis was the cause. There were many causes, and tuberculosis was one of them. As Dr. McLeod said, some cases were associated with frank tuberculosis; other cases were due to focal infection. In one case now under observation, the condition was caused by an intestinal toxemia. The patient even submitted to an operation, the appendix being lifted out of the abdomen and drained for several days, and then removed. Her case of lupus erythematosus was a classical case, seen by various members of the Society in New York, including Dr. Fordyce. The lupus erythematosus was so tender that it could not be touched, and only a few days after the operation all the sensitiveness had disappeared and the skin condition had diminished; at the time of presentation, it had almost disappeared. One could pinch the cheeks, etc., and there was no pain, and the eruption had practically disappeared.

Replying to an inquiry by Dr. Highman as to whether the lupus erythematosus in this case was of the discoid or disseminated type, Dr. Whitehouse said that it was a typical disseminate lupus erythematosus of the face, with atrophy and scaling, and keratotic plugs on the under surface of the scales accompanied by intense hypersensitiveness. He had just received a letter which stated that all the sensitiveness had passed, that the nose was 90 per cent. better and the cheeks 50 per cent. improved.

XANTHOMA DIABETICORUM. Presented by DR. TRIMBLE.

M. R., a woman, aged 47, married, born in Germany, presented over the extensor surface about the elbows and over the front of the knees an eruption of discrete small nodules (or large papules) with reddish bases and chamois colored summits. The lesions were generally the size of a pea, and in each of the four affected areas there were about ten or twenty. The summits of the majority of the lesions were flattened rather than pointed. The condition had been of about three months' duration, and little itching had been noted. There were 360 mg. of blood sugar in 100 c.c. of blood. Urinalysis revealed: specific gravity, 1.040, acid, a trace of albumin, sugar (later 1 per cent.), a normal amount of indican (later slight excess), and a moderate number of hyaline and a few granular casts, yeast and fungi.

DISCUSSION

DR. FRASER said that he had studied the sections from this case and had searched carefully for fatty degeneration of the vessels described by Johnston in Sherwell's case, but had not found it. The fatty change in this case at least was obviously in that group of cells that Marchand called adventitial cells. Maxinmow called them polyblasts, but they were probably the same. They were cells that were found around the vessels in low grade inflammations. He did not know what the origin of these cells was. Probably the best interpretation was that we were dealing with a fatty degeneration of connective tissue cells. The fat cells were in the proper place for this interpretation.

DR. KINGSBURY said that these cases are not common now, and that he had not seen one for a long time. He remembered Dr. Johnston's discussion of Dr. Sherwell's case, and about fifteen or twenty years ago almost every year a case would be shown.

DR. BECHET said that he remembered the case to which Dr. Lane had referred. There had been a marked improvement from the administration of insulin. He had been particularly interested in the therapeutic side of this case, and hoped that if Dr. Trimble contemplated giving his patient insulin, he would report the results.

DR. WHITEHOUSE said that he agreed with Dr. Kingsbury that not so many of these cases were seen as formerly. Referring to what had been said by Dr. Lane and Dr. Bechet, Dr. Whitehouse told of a recent case at the Post-Graduate Hospital, in which the condition had almost disappeared under treatment with insulin.

DR. TRIMBLE, in replying to an inquiry, said that the diagnosis was made clinically, and the tests were made to confirm it.

DR. WHITEHOUSE said that this patient's lesions were almost like the lesions of a patient whose case he had reported but was unable to show before the Society about four weeks before. This patient was greatly improved, not under treatment with insulin but under the ordinary diabetic diet. Dr. Whitehouse said that he would be inclined to have made the diagnosis from the appearance of the lesions themselves, but of course the cholesterol content of the blood and the urine would help to confirm the diagnosis of xanthoma diabeticorum. He agreed with the diagnosis.

DR. HIGHMAN, in response to an inquiry, said that the lesions individually resembled the ordinary lesions seen in xanthoma. He agreed with Dr. Fraser's point of view that there was no difference under the microscope between diabetic

xanthoma and the lesions of ordinary xanthoma; neither had he been able to confirm, under the microscope, the findings reported by Dr. Johnston and Dr. Sherwell. The lesions were practically as described by European microscopists, a degeneration of connective tissue which gave the picture that was well shown under the microscope, indicating that the entire process depended on the presence of neutral fat drops in connective tissue shown by the scarlet red stain. Probably the reason one did not see more cases of diabetic xanthoma was that even before the discovery of insulin, patients with diabetes took better care of themselves than formerly.

Dr. Lane inquired whether any one had made a study of the cholesterol content of the blood in these cases of xanthoma diabeticorum.

Dr. Highman replied that he thought such studies had been made. Lebedew had artificially produced xanthoma, and published his work some ten years ago.

Dr. Trimble said that the course of the disease rather than the individual lesions was different from the ordinary xanthoma.

Sarcoma Cutis. Presented by Dr. Trimble.

J. W., a man, aged 74, born in Germany, said that he had first noticed a nodule on his left lower leg; a month later, lesions appeared on the arms, thighs and trunk. The lesions consisted of numerous violaceous red, rounded and oval tumor-like nodular infiltrations, varying in size from that of a pea to that of a walnut. Some of them were adherent to the skin. The lymph nodes were greatly enlarged. A blood count revealed: hemoglobin, 70 per cent.; white blood cells, 6,000; red blood cells, 5,760,000. The report of the histologic examination was sarcoma cutis, round cell type.

DISCUSSION

Dr. Whitehouse said that he agreed with the diagnosis, and remarked that it was a rapid dissemination.

Dr. Fraser said that the lesions did not behave like metastatic growths. Their even distribution and manner of development—numerous nodules arising simultaneously and growing rapidly—pointed to a primary multiple origin. Metastasis in this type of sarcoma usually occurred by way of the blood stream, and the natural route from the original nodule in the leg would be by way of the veins to the lung. Careful physical examination revealed no evidence of involvement of these organs. There was no evidence of metastasis in any of the internal organs. It was hardly conceivable that growths as large as these, if present in the lungs, should not produce clinical symptoms or physical signs. Dr. Fraser said that he thought the case was one of unusual interest both from the standpoint of diagnosis and prognosis. These tumors were growing rapidly. He had watched new ones develop since he first saw the patient only two weeks ago. It would be interesting to observe and follow the case to its termination. At present, there was no evidence of internal metastases. He had made a careful study of sections from two nodules, and he was convinced that the case should be recorded as belonging to the group described by Koposi as multiple primary cutaneous sarcoma. This did not necessarily mean the pigmented hemorrhagic type, for here we had neither pigment or hemorrhage. This was probably the rarest type of sarcoma occurring in the skin, and when he used the term sarcoma as applied to this group he meant a true sarcoma of fibroblastic origin, and not lymphosarcoma,

which was entirely different. The late Dr. Johnston, in an article published in the *British Journal of Dermatology,* 1901, called attention to the extreme rarity of these tumors. Histologically, this case was sarcoma of the small, round and spindle cell type. There was an irregularity in the size and shape of its cells. Some of them were spindle shaped and some were round. It was impossible to say on morphologic grounds from what tissue the tumors were originating. There was no evidence that they were arising from the endothelium of blood vessels, but there was evidence of new collagen formation, and this fact strongly supported the contention that the tumors were of fibroblastic origin. In the sections stained by the van Gieson method, one could see fine fibrils intimately connected with the cell cytoplasm. These fibrils were much finer than, and must be distinguished from, remnants of preexisting collagen. In his opinion, the combined clinical and histologic picture of the case proved conclusively that it was a case of multiple cutaneous sarcoma, and Dr. Trimble was to be congratulated on making the diagnosis on the clinical appearance alone. Some of the members of his staff made a different diagnosis.

Dr. Wise said that Dr. Fraser's discussion in reference to the pathology had interested him very much, for he knew much more about the subject than he did himself. His own impression, from the purely clinical standpoint, was that these cases were not rare; he saw them once or twice a year, and he thought that they were metastatic lesions.

Dr. Highman said that he thought there was no question but that the man had sarcomatosis. One striking point of Brocq's remark was that the lesion of mycosis fruste so much more resembled sarcomatosis than it did mycosis that perhaps we were not dealing with mycosis at all in these cases. This man had clinically a frank sarcoma. Mycoses and lymphadenomas would probably return to the sarcoma class from which they had departed. He did not think that one could talk of the ordinary spindle cell sarcoma in this case. Aside from the various minor details, Dr. Fraser's exposition of the subject seemed sound and acceptable; only, Dr. Highman said he did not see how one could say that these were not metastases and that they originated in multiple foci de novo.

Dr. Williams said that Dr. Fraser had said that in favor of his view that these were all de novo developmental sarcoma was the fact that there were no internal metastases. The man might have some spots in his internal organs and yet give no evidence of it. The case would have to come to necropsy before that could be known.

Dr. Trimble said that Dr. Fraser believed that the lesions were de novo in the skin, and his own point of view was that they were metastases from a parent growth, that opinion being based on the fact that every sarcoma was one, and all subcutaneous lesions were metastases.

Erysipeloid of Rosenbach. Presented by Dr. Bechet.

H. E., a man, aged 29, born in the United States, a bus boy, when first seen in Dr. Trimble's service at the University and Bellevue clinic, said that the lesion had been present for two months. Covering most of the back of the right hand and phalanges was a large, dark red, infiltrated, sharply defined patch. There were no vesiculations, no other surface changes and no itching.

He said that he frequently injured his hands on the roughened edges of plates and dishes in emptying waste food. The lesion had shown no change for a month previous to his application for relief.

DISCUSSION

DR. FRASER said that he agreed with Dr. Bechet's interpretation.

DR. KINGSBURY said that he thought it was a simple dermatitis.

DR. CLARK said that the first thing that struck one was that the man had been working with a powder that irritated his hands, and the result was a chronic dermatitis. He was inclined to agree with Dr. Kingsbury on that diagnosis.

DR. WILLIAMS said that he thought it was a washing powder dermatitis. There was no great inflammation or anything to make one think of the erysipeloid of Rosenbach.

DR. TRIMBLE said that he agreed with Dr. Bechet's diagnosis; the shiny glistening appearance did not look to him like a dermatitis—a trade dermatitis, so-called. If the condition had been due to the irritating powder, it would be like an old-fashioned eczema. If it were a dermatitis, it would itch and would have more infiltration; and dermatitis is nearly always bilateral.

DR. WILLIAMS said that nearly all cases of erysipeloid that he had seen had been infections from some decomposed animal matter; it might be on one hand or on both hands. It was an entirely different picture from that presented in this case. The man said that he used the powder with only the right hand; it was not the type of sudden infection that one gets in the so-called Rosenbach's erysipeloid. In his opinion, it was an industrial dermatitis.

DR. HIGHMAN said that he thought the point brought out by Dr. Williams was suggestive; he had himself never heard of an erysipeloid of Rosenbach except in connection with a streptococcus infection. The lesion healed centrally and proceeded peripherally, etc., and usually involved one or two fingers, and lasted a week or ten days only. This case seemed like a chronic dermatitis; the man had not had to use both hands, for he had stated explicitly that he did not use his left hand in the work.

DR. TRIMBLE said that he agreed with what Dr. Bechet had said. On account of the condition beginning in one place and proceeding outwardly, and on account of its duration (it looked as though it had begun on one finger and cleared up, and then proceeded to the back of the hand), the presenter's diagnosis seemed reasonable. Another reason was that he was a bus boy, and handled broken bits of meat, fish, etc. Dr. Trimble had always been under the impression that the erysipeloid of Rosenbach was not deep seated, but a subacute superficial inflammatory condition due mainly to handling fresh meat or fish.

DR. BECHET said that he did not see how any other diagnosis could be made in this case, for there were no changes in the skin itself, no vesiculation or itching and no discernible lesions other than an inflammation that seemed rather deep-seated, sharply marginated, resembling a cellulitis. The patient handled much waste food, and possibly might have been scratched by a broken plate and so caused an infection. Dr. Bechet had never seen a dermatitis without some evidence on the skin surface itself. In view of these facts, he was therefore inclined to consider the diagnosis as presented the correct one.

LICHEN PLANUS, SHOWING UNUSUAL MUCOUS MEMBRANE LESIONS. Presented by DR. BECHET.

J. B., a man, aged 34, born in Russia, who had been living in the United States for twenty-four years, on his appearance in Dr. Whitehouse's service at the Skin and Cancer Hospital, said that the lesion had been present for fourteen years. He had typical lichen planus lesions on the forearms, wrists and glans penis. On the lips and mucous membrane of both cheeks were bluish-white patches in reticulated lacelike distribution, much like a mosquito netting.

A CASE FOR DIAGNOSIS: KERATOSIS OF THE LEGS. Presented by DR. WILLIAMS.

J. J., a man, aged 43, presented lesions which he said began as a small spot on the right shin, which gradually spread over both shins. There were a large number of close-set horny papules—none shiny, none flat-topped; some capped with small scales and apparently spiny; some on the left leg were distinctly spiny. Was the condition lichen planus or lichen spinulosus?

Biopsy revealed: hyperkeratosis; increased granular layer; no cell formation; acanthosis; no infiltration in corium suggestive of lichen planus.

DISCUSSION

DR. TRIMBLE said that it was an unusual case, especially on account of its being confined to the legs; but that Darier's disease ought to be taken into consideration. The pathologic report did not indicate anything of that nature, but if the pathologist did not have that in mind he might overlook some of the degenerated epithelial cells. It did not seem to be lichen spinulosus, as he understood that condition; but if the lesions were in other locations, the back of the neck, axillae or pubic regions, he would not hesitate to call attention to the fact of their resemblance to Darier's disease. They were follicular and keratotic.

DR. CLARK said that he agreed with the probable diagnosis of lichen planus.

DR. FRASER said that he was inclined to think it would turn out to be a case of hypertrophic lichen planus. If it were Darier's disease, it would show distinct histologic features. Dr. Williams said there was a marked increase of the granular layers. Other sections might show more characteristic features of lichen planus.

DR. HIGHMAN said that two things should be considered: a hypertrophic form of lichen planus and neurodermite or the hypertrophic form of chronic lichenification. The histologic changes recorded in the epidermis were suggestive of lichen planus hypertrophicus, and in this particular variety the characteristic form of the infiltration, with the sharply circumscribed lower margin was often lacking, due to the rising of the papillae which disturbed the picture. There were excellent pictures of this in an article published by Dr. Fordyce a few years ago on the pathology of the disease. Clinically and histologically, it seemed to be lichen planus.

DR. WILLIAMS expressed regret that he had not had a chance to study the case longer and by daylight, neither had he seen the slides. The possibility of Darier's disease should be considered; the clinical appearance was something like that in Darier's disease, although the distribution and pathology were not. Clinically, he saw no papules like lichen planus hypertrophicus. Many of the papules were capped with scales and some with distinct spiny

projections; therefore he could hardly accept the diagnosis of lichen planus. He did not know what it was, but would have further studies made, and would endeavor to bring slides to the next meeting. He would have another biopsy made.

LUPUS VULGARIS. Presented by DR. WISE for DR. FORDYCE.

L. D., a woman, aged 49, unmarried, had been suffering from lupus vulgaris ever since she was 1 year old. The entire left arm and forearm were studded with apple-jelly nodules fused in some areas, forming large patches with atrophic areas in between. There was contracture of the left elbow from scarring. The right side of the neck showed a half-dollar sized, infiltrated, reddish patch, studded with apple-jelly nodules, and two similar patches were present on the right gluteal region and right leg. Aside from the application of some salves, she had received practically no treatment. The patient was presented to show the condition at the present time, with the object of demonstrating her later to show the therapeutic results of radiating the whole body with ultraviolet light.

METASTATIC (?) ANGIOMAS FOLLOWING SURGICAL REMOVAL OF PRIMARY ANGIOMA OF BOECK. Presented by DR. WISE for DR. FORDYCE.

P. H., a youth, aged 17, born in the United States, a tinsmith, came to the Vanderbilt clinic on account of lesions on his back which had been present for four months, and which followed the surgical removal of a lesion three weeks previously. He brought along a letter from his physician stating that the pathologic diagnosis of the excised lesion was capillary hemangioma. Since the removal of the original lesion, new ones had been coming out. In the upper part of the interscapular lesion was a scar where the original lesion had been excised. Grouped around this scar in an area about 3 inches (7.6 cm.) in diameter were about two dozen elevated, deeply red angiomas, varying in diameter from that of a pinhead to one-eighth inch (0.3 cm.). There were also two distinctly pedunculated lesions with a thick black crust on the surface. These lesions bled considerably on slight trauma.

PARAPSORIASIS, BROCQ TYPE. Presented by DR. BECHET.

G. T., aged 21, from Dr. Whitehouse's service, born in Hungary, who had been living in the United States for three years, had lesions that had been present for three years, which had undergone no change in appearance since their inception. There were absolutely no subjective symptoms; the patient had never noted any itching. The eruption was confined mostly to the trunk, but there were also lesions on the thighs and arms. The eruption consisted of large yellowish to dusky red, rather sharply defined plaques, some of which showed a tendency to circinate outline. They were not infiltrated, and scaled slightly. The histopathologic report was noncommittal; there was edema in the upper cutis, with marked dilatation of the blood vessels and a slight acanthosis. A differential blood count revealed: polymorphonuclear neutrophils, 68 per cent.; large mononuclears, 1 per cent.; lymphocytes, 27 per cent.; transitionals, 2 per cent.; eosinophils, 3 per cent. The case had been presented at the last meeting of the Academy by Dr. McCafferty, as a case for diagnosis. At that meeting the diagnosis of parapsoriasis seemed to be the most favored, and further study of the facts inclined to the correctness of such a diagnosis.

DISCUSSION

DR. CLARK said that it was an interesting case. At first he had thought it mycosis fungoides and tried to get a history of itching, but the man denied this; nor did examination of the lesions show any infiltration. These were two strong points against mycosis fungoides, and therefore he agreed tentatively with the diagnosis of parapsoriasis en plaque.

DR. WILLIAMS said that his first impression was similar to Dr. Clark's—the color of the lesions, a dusky red instead of the brown of parapsoriasis, suggested premycosis; that was still his diagnosis. The absence of itching was against the diagnosis of mycosis, but we find some cases of a premycotic condition without itching. The absence of infiltration was not against the diagnosis of mycosis, for in the early stages we have cases without it. He had now under observation a typical case of mycosis fungoides, confirmed by biopsy, and just now developing a patch which was not infiltrated, and with only a moderate itching. He had never seen parapsoriasis en plaque of such a dark color and with so little scaling as in this case; and in all probability this patient would later develop typical tumors.

DR. WISE said that he agreed with what Dr. Williams had said, in spite of the fact that the biopsy showed no infiltration; and he disagreed with the idea that mycosis fungoides could be diagnosed in its early stages. He told of a case in which the first biopsy was negative, and the second one revealed undoubted mycosis fungoides. He thought that this patient, if he did not already have the condition would undoubtedly later develop true mycosis fungoides.

DR. TRIMBLE said that it was well known that many of these cases were observed for a number of years and called parapsoriasis, and later turned out to be mycosis fungoides; but at the present time, with the absence of itching and lack of scaling, he thought it was a case of parapsoriasis.

DR. HIGHMAN inquired as to what was Dr. Williams' opinion concerning the early signs of mycosis fungoides. This question had been under discussion for ten years, and he would like to know what it meant.

DR. WILLIAMS replied that in this patient there was no inflammatory cellular infiltration in the corium, but the fact that there were no cellular infiltrations did not prove that this would not be a case of mycosis fungoides.

DR. HIGHMAN said that he did not see how cells could divide in a human being without mitosis, and he did not believe that mitosis meant anything. In his opinion, all this talk about the early diagnosis of mycosis under the microscope meant little. Dr. Highman said that he believed this man had parapsoriasis, and that ten years hence he would have mycosis fungoides.

DR. WILLIAMS replied that if Dr. Highman thought the patient had parapsoriasis now and would have mycosis fungoides ten years hence, it was certainly a case of premycosis.

DR. BECHET said that the diagnosis of premycosis had been considered, but the patient said that he never had any itching. The lesions were not infiltrated, and had undergone no change in three years; in view of these facts, the diagnosis of parapsoriasis seemed a better one. In his opinion, there was too great a tendency at the present time to make diagnoses of premycosis; a large number of cases were presented at the various meetings in recent years with such a diagnosis, yet it was rare to observe a frank case of mycosis in the infiltrated, tumor or fungoid stage. In his opinion, a certain number of these cases were not related to that disease.

VON RECKLINGHAUSEN'S DISEASE AND TUBERCULOSIS CUTIS VERRUCOSA. Presented by DR. WISE for DR. FORDYCE.

H. M., a man, aged 51, who was married and had no children, presented a lesion on the left hand that started twenty years before, and another on the wrist that started six years before. The index finger on the affected hand had been thickened for only two months. A roentgenogram showed no bone involvement. On the body were typical lesions of Von Recklinghausen's disease, which the patient stated began twenty years before. The left wrist presented a verrucous, nodular and nonpainful patch which was 4½ by 1½ inches (10.2 by 2.6 cm.) in size, on the external surface. This surface presented numerous nodules which were raised and warty and which exuded pus on pressure. The general arrangement of the lesion was serpiginous. On the dorsum of the left little finger, there were several erythematous and verrucous lesions which extended to the palmar surface. The left index finger was about four or five times the normal size, the skin somewhat glossy and erythematous but not painful, and a small sinus was present at the base and dorsal aspect of the finger. All over the body he had had, as far as he could remember, many pendulous raised and subcutaneous soft fibromas, varying in size from that of a split pea to that of a marble, with numerous café-au-lait spots covering the trunk and extremities. His Wassermann test was negative. A biopsy report would follow.

DISCUSSION

DR. TRIMBLE said that he was inclined to agree, in the main, with Dr. Wise. He believed that the patient had a chronic tuberculosis, and as far as could be judged at present, the lesion on the hand was tuberculosis verrucosa cutis of long standing. When he first glanced at the case, he had thought it was a tuberculous dactylitis of the finger, but as he understood dactylitis, it was a chronic condition of the soft parts and bone. Dr. Wise said that there was nothing wrong with the bone. The body lesions were Von Recklinghausen's disease, and Dr. Wise's conception of the case was doubtless correct.

MULTIPLE SPONTANEOUS KELOIDS. Presented by DR. SCHWARTZ.

M. W., a negress, had numerous large keloids on her back and shoulders. She said that the first one appeared about twelve years before following a bite, but she gave no history of trauma preceding the development of the other keloids.

MINNESOTA DERMATOLOGICAL SOCIETY

Regular (May) Meeting, April 30, 1924.

H. G. IRVINE, M.D., *Presiding*

GUMMA COVERING THE WHOLE LOWER EXTREMITY, EXTENDING FROM HIP TO ANKLE. Presented by DR. ARMSTRONG.

Mrs. P., aged 53, seen March 24, 1924, stated that she had had the present lesion for eighteen years. She had consulted a number of physicians at various times, and had received no treatment but local applications. She even

returned to Germany two years ago in hopes of a cure being effected there. The leg was twice the size of the other limb, and there were multiple ulcerations. Within a fortnight after treatment was begun, the ulcerations were completely healed and the leg normal in size. She gave no history of infection. The Wassermann test was positive.

ACTINOMYCOSIS. Presented by DR. FREEMAN.

This case—that of a boy with a lesion on the side of his face—was presented at a previous meeting. Dr. Freeman said that the boy was improving, the body of the lesion having subsided. He had curetted the lesion and painted it with iodin. He has been given potassium iodid and had been taking it very well. He has also received roentgen-ray treatment for two or three weeks.

DISCUSSION

DR. IRVINE said that this patient might easily have a reaction from the combined use of roentgen ray and iodin locally.

LATE HEREDITARY SYPHILIS. Presented by DR. MICHELSON.

A man, aged 25, married, whose wife was living and well but who had no children, had the following family history: His mother and father were living and well. They had had five children. The first and second died in infancy. The patient was the third child. The fourth child was living and well, and the fifth child died in infancy. The patient had no history of the usual signs of early congenital syphilis. The left tibia showed a marked arciform swelling located midway between the knee and ankle. There was no change in the overlying skin. On side view, the tibia had a distinct sabre-blade bowing. The region pained him a great deal. In the right radius there was a marble-like swelling at the distal extremity. The Wassermann test was positive.

DISCUSSION

DR. MICHELSON said the question in this case was whether the condition was late hereditary or acquired syphilis. He thought the history and the manifestations pointed toward a congenital type.

DR. IRVINE said that he had seen this patient in consultation at the University Hospital. The patient had been admitted for a surgical operation. There was a question of suppurative periostitis. The roentgen ray showed periostitis, and there were spots which showed loss of bone tissue. Dr. Irvine said that it had looked to him like a case of syphilis, and he had suggested that the patient be given treatment before operation was considered.

A CASE PRESENTED FOR DIAGNOSIS. Presented by DR. SWEITZER.

A woman, aged 22, had had a genital sore during the fall of 1923. She was given two mercury treatments and later sixteen neo-arsphenamin treatments. During this course of treatment, an eruption appeared on the body and limbs. The patient showed a rough follicular hyperkeratosis over the body and limbs. Dark, pigmented areas also were present.

DISCUSSION

Dr. Sweitzer said that he had seen this patient that day for the first time. He thought some of the lesions looked like syphilis, but the eruption came out under arsphenamin treatment and was attended with a great deal of itching. He was inclined to make a diagnosis of arsphenamin dermatitis. He did now know what the pigmentation was. He expected to have a biopsy made.

Dr. Turnacliff asked whether this patient did not receive four or five neo-arsphenamin treatment afterward. If it had been arsphenamin dermatitis, would it not have been aggravated by that?

Dr. Sweitzer said that she had stopped taking the treatments and had had no treatment for two months.

Dr. Armstrong asked whether there was any possibility that this patient might have received some silver arsphenamin.

Dr. Irvine said that he did not think so, as he did not think they used it at Wells Memorial Clinic.

Dr. Michelson said he felt that there were several processes to be considered in this case. He thought the patient had undoubtedly had syphilis and that she also had an icthyotic skin, with follicular involvement. He did not recall ever having seen a syphilitic lesion in a patient who had ichthyosis, and asked whether the members of the society could relate such an experience.

Dr. Sweitzer said that they had debated about that too, but if one looked closely there were areas in which there was no lesion. The condition was more on the flexor side, and in other areas the skin was perfectly smooth.

Dr. Olson said that the fact that the palms were not involved, but were smooth and soft, would be against the diagnosis of chronic arsphenamin dermatitis. Some of the lesions resembled lichen, some resembled psoriasis, and the disease was chronic. These findings suggested parapsoriasis. The peculiar netlike arrangement of the lesions would indicate parakeratosis variegata.

A Case for Diagnosis. Presented by Dr. Butler.

The patient presented a lesion on nose.

DISCUSSION

Dr. Butler said that he first saw this case two weeks before. The patient had a red inflammatory nose studded with pustules. The patient had said that he had occlusion of the right nostril and had had a submucous resection about a year ago. Dr. Butler had taken the patient to this physician and asked him to put on hot dressings, but when the patient returned in a few days the condition had not changed very much. Dr. Butler then put on some sulpho-ichthyolate preparation and the lesion changed very much. The patient also had two subcutaneous nodules on the neck, highly suggestive of nodular syphilis. The lesion began with folliculitis of the nose. Dr. Butler said that he had no thought of syphilis in connection with this case until somebody mentioned that it might be that condition. However, he would not make a diagnosis of syphilis without making a Wassermann test.

Dr. Felden said that he would not hesitate to make a diagnosis of tertiary tubercular syphiloderma from the clinical picture of the lesions. The brownish-red, coppery colored patch was formed by rounded nodules of firm consistency and

a definite deep-seated infiltration. The fact that the patient showed some complicating acne-like lesions, superficial pustules and dilated follicles proved nothing against the diagnosis of syphilis, as the persistent congestion in this region often produces a hyperactivity and even hypertrophic changes of the sebaceous glands with ensuing gaping follicular orifices, dilated capillaries and resulting rosacea or rhinophyma-like appearance. He recalled several similar cases he had seen in former years which seemed to indicate acne rosacea. The patients were treated with sulphur lotions, the roentgen ray and other appropriate methods without any success, while potassium iodin cleared the picture at once, and those who had made a diagnosis of tertiary syphilis, at first glance proved to be right. In some instances, the Wassermann test was negative. In this case, Dr. Felden would make a diagnosis of tertiary tuberoserpiginous syphilis or tubercular syphiloderm of the nose.

Dr. Sweitzer said that he thought this condition was syphilitic, and even if the Wassermann test were negative, he would treat the case as syphilis. He thought possibly the nose was involved with the folliculitis, and when the symptoms were treated, the lesion was not so pronounced. The lesions on the neck made him suspect that the condition was syphilis.

Dr. Olson said that large chronic papules, of the type shown by the patient, on the tip of the nose were practically always syphilitic.

A Case for Diagnosis. Presented by Dr. Wethall.

The patient came to the dispensary, and gave a history that last December the left testicle became hard and swollen. Later the swelling disappeared. Two months before presentation, the right testicle became swollen. It was not painful, and the patient did not say anything about tenderness. The prostate seemed to be involved, with the same hardness found in the testicle. The Wassermann test was negative. The urinalysis report was not back from laboratory, but there was a slight cloudiness of the urine.

DISCUSSION

Dr. Michelson said that his conception of this case was that of an interstitial syphilitic orchitis—not the gummatous type. He said that in these cases the prostate was not involved as a rule, but that in the chronic type of syphilitic epididymis the cord was often indurated. Following treatment, syphilitic orchitis may result in complete atrophy of the gland.

Dr. Freeman said that the important thing in this case was that the left testicle was involved; the man then took a lot of patent medicines, most of which contained potassium iodid, and the swelling disappeared entirely. He thought for that reason alone one could exclude malignancy. The absence of pain also would suggest a diagnosis of syphilis.

Dr. O'Leary pointed out that the left testicle seemed to be fairly normal. He said that all gummatous testicles he had seen, following treatment have been small atrophic useless organs. He thought tuberculosis should be considered as well as syphilis, as involvement of other organs in the genito-urinary tract is usually associated with tuberculosis of the testicle. The therapeutic test for syphilis should consist solely of mercury, otherwise the nonspecific effect of arsphenamin on tuberculosis must be reckoned with.

Dr. Armstrong asked whether it was not true that tuberculosis usually started in the epididymis, not the testicle.

Dr. Wethall asked whether the prostate was as a rule involved in these syphilitic conditions of the testicle. In this case, there was definite involvement of the prostate.

Dr. Armstrong said that he had seen cases in which the prostate and both testicles were involved at the same time. He called attention to Lancereaux's "Treatise on Syphilis" (New Sydenham Societies Translation), which he thought gave the best information on the subject that could be found despite the fact that the work is now sixty years old.

Dr. Butler recalled looking up the literature some fifteen or twenty years ago on syphilis of the prostate, and, as he recalled, only four or five cases had been reported up to that time. Now there are only thirty or forty cases, so that syphilis of the prostate is really a clinical curiosity.

A Case for Diagnosis. Presented by Dr. Irvine.

A man, seen for the first time on the day of presentation, had an erythema that had supposedly started three or four weeks before. The patient had put on some tar salve, which he left on for two or three days, and this had irritated the lesion. The patient presented symmetrical round erythematous plaques. He said that he had taken no medicine except some pills for his bowels, which proved to be Hinckle's pills. There was no history of any other drug having been taken within the past several months.

DISCUSSION

Dr. Sweitzer said that it looked to him like a drug eruption, but if the patient had not taken any drugs that would be rather far-fetched.

A Case for Diagnosis. Presented by Dr. Irvine.

The patient presented lesions resembling psoriasis or lichen planus.

DISCUSSION

Dr. Irvine said that he recalled one patient who had three or four attacks of exfoliating dermatitis with psoriasis and then presented the picture of lichen planus. He would like to hear what others thought about it.

Dr. Michelson said that the tissue had been submitted to him before he saw the case clinically, and that he had made a diagnosis of psoriasis vulgaris. Now, on seeing the case, he felt that his microscopic diagnosis was correct. In connection with the history, Dr. Michelson related the history of a patient who had been well previously, who developed a generalized psoriasis ushered in by an acute tonsillitis accompanied by high fever.

Dr. O'Leary said that the present condition looked like psoriasis. There were no lesions on the mucous membranes or on the glands of the penis to suggest lichen planus. He had seen nothing to suggest a lichen planus papule.

D. D. Turnacliff, M.D., Secretary.

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Amidopyrin in Treatment of Measles. M. Leowenthal, Brit. M. J. **2**:51 (July 12) 1924.

Botulinus Toxin Skin Reaction. V. De Lavergne, Compt. rend. Soc. de biol. **91**:689 (Aug. 12) 1924.

Case of Actinomycosis. A. I. G. McLaughlin and D. S. Page, Lancet **2**:114 (July 19) 1924.
Case of Leprosy. G. H. Lancashire, Brit. J. Dermat. **36**:312 (July) 1924.
Condylomatous Tumor of Lip. A. G. Tresidder, Indian M. Gaz. **59**:346 (July) 1924.
Cyanosis Due to Poisoning from Shoe Dye, Case of. H. I. Reynolds, J. Georgia M. A. **13**:348 (Aug.) 1924.

Desquamative Erythrodemia Generalized. G. Belloni, Pediatria **32**:907 (Aug. 1) 1924.
Diabetic Gangrene of Nose. E. S. Connell, Missouri M. A. J. **21**:277 (Aug.) 1924.
Duodenal Ulcer After Burns. F. Ronchese, Riforma med. **40**:753 (Aug. 11) 1924.

Effect of Pregnancy on Scurvy in Guinea-Pigs. H. J. Gerstenberger, W. M. Champion and D. N. Smith, Am. J. Dis. Child. **28**:173 (Aug.) 1924.
Electricity in Dermatology. E. D. Chipman, J. A. M. A. **83**:971 (Sept. 27) 1924.
Erythromelalgia. E. May and P. Hillemand, Ann. de méd. **16**:51 (July 15) 1924.
Etiology of Typhus. M. H. Kuczynski et al., Klin. Wchnschr. **3**:1429 (Aug. 5) 1924.

Fur Dermatitis. W. G. Harvey, Irish J. M. Sc. **5**:316 (July) 1924.

Germ of Measles. M. B. Sindoni, Pediatria **32**:888 (Aug. 1) 1924.

Human Anthrax; Shaving Brush Infections. W. B. Blanton, Virginia Med. **51**:265 (Aug.) 1924.
Human Skin Pigment. C. Moncorps, München. med. Wchnschr. **71**:1019 (July 25) 1924.

Impetigo Contagiosa. J. Harper Blaisdell, J. A. M. A. **83**:833 (Sept. 13) 1924.
Intradermal Vaccination. D. E. Berney, Atlanta M. J. **27**:713 (Aug.) 1924.

Jaundice During Arsphenamin Treatment. G. Natali, Riv. Crit. di clin. med. **25**:185, 1924.

Kala-Azar, Analysis of Fifty Cases. I. Besu, Calcutta M. J. **19**:745 (July) 1924.
Kala-Azar in Children. R. Jemma, Paris méd., p. 153 (Aug. 23) 1924.

Latent Febrile Herpes. P. Basato and Busacca, München. med. Wchnschr. **71**: 1056 (Aug. 1) 1924.
Lupus Erythematosis, Telangiectatic. L. F. Heimburger, China M. J. **38**:553 (July) 1924.
Lupus Erythematodes and Tuberculosis. Bloch and Ramel, Schweiz. med. Wchnschr. **54**:723 (Aug. 5) 1924.

Measles, Amidopyrin in Treatment of. M. Leowenthal, Brit. M. J. **2**:51 (July) 1924.
Multiple Cutaneous Leiomyoma. K. P. Frost, J. A. M. A. **83**:906 (Sept. 20) 1924.

Primary Erysipelas of Tongue. M. Parega and H. Reta, Rev. med. d. Uruguay. **27**:128, 1924.
Progress in Scarlet Fever. H. Aldershoff, Nederlansch Tijdschr. v. Geneesk. **2**:780 (Aug. 9) 1924.
Purpura Hemorrhagica Treated with Radium and Roentgen Ray. C. Goldmark and A. W. Jacobs, Am. J. Obst. & Gynec. **8**:208 (Aug.) 1924.

Rat-Bite Fever, Two Cases of. W. T. Collier, Brit. M. J. **2**:265 (Aug. 16) 1924.
Recurrence of Scarlet Fever. E. Boschi, Riv. di clin. Pediat. **22**:548 (Aug.) 1924.
Rust's Pseudo-Erysipelas. Esau, Arch. f. klin. Chir. **130**:36 (Aug. 7) 1924.

Scalp Ringworm in Adults. G. H. Lancashire, Brit. J. Dermat. & Syph. **36**: 312 (July) 1924.
Scarlatina in Indians. C. A. Sprawson, Indian M. Gaz. **59**:344 (July) 1924.
Scarlet Fever. H. Hederschee, Zentralbl. f. inn. Med. **45**:569 (July 19) 1924.
Scarlet Fever Occurring in School Children, Epidemiologic Study of. F. M. Houghteling, Ohio State M. J. **20**:514 (Aug.) 1924.
School Children, Scarlet Fever Occurring in, Epidemiologic Study of. F. M. Houghteling, Ohio State M. J. **20**:514 (Aug.) 1924.
Seborrheic Dermatitis. G. Panja, Calcutta M. J. **19**:773 (June) 1924.
Skin Reactions to Radium Exposure and Their Avoidance in Therapy; An Experimental Investigation on. J. C. Mottram, Brit. J. Radiol. **29**:174 (May) 1924.
Skin Sensitiveness to Proteins and Toxins. R. C. Low, Brit. J. Dermat. & Syph. **36**:292 (July) 1924.
Smallpox, Chickenpox and Syphilis. Esau, Med. Klin. **20**:1109 (Aug. 10) 1924.
Specific Streptococcus in Scarlet Fever. J. Mouzon, Press méd. **32**:652 (Aug. 2) 1924.
Squamous Cell Carcinoma Due to Kangri Burn. E. F. Neve, Indian M. Gaz. **59**:341 (July) 1924.
Staphylococcus Opsonins in Itching Dermatoses. Lowenfeld, Wien. klin. Wchnschr. **37**:826 (Aug. 21) 1924.
Subcutaneous Injection of Cod Liver Oil. Francken, Rev. méd. de la Suisse Rom. **44**:463 (July) 1924.
Sun Cure. H. J. Gauvain, Brit. M. J. **2**:234 (Aug. 9) 1924.
Swine Erysipelas in Man. Gioseffi, Riforma med. **40**:721 (Aug. 4) 1924.

Tar Cancer in Rabbits. A. H. Roffo, Prensa méd. argentina **11**:168 (July 20) 1924.
Testing Preparations for Hair Growth. Loewe and Faure, Klin. Wchnschr. **3**:1532 (Aug. 19) 1924.
Therapeutic Uses of Radium. A. E. H. Pinch, Bristol. Med.-Chir. J. **41**:97 (July) 1924.
Transmission of Kala-Azar. C. Nicolle and C. Anderson, Arch. de l'Inst. Pasteur, Tunis **13**:155 (June) 1924.
Treatment of Arsphenamin Dermatitis. H. Sieben, Med. Klin. **20**:1111 (Aug. 10) 1924.
Treatment of Cancer of Lip by Irradiation. B. F. Schreiner and L. C. Kress, J. Cancer Res. **8**:221 (July) 1924.
Treatment of Erysipeloid. F. Franke, München. med. Wchnschr. **71**:1094 (Aug. 8) 1924.

Uses of Radium, Therapeutic. A. E. H. Pinch, Bristol Med.-Chir. J. **41**:97 (July) 1924.

Vaccination Against Smallpox, Intracutaneous. J. H. Gettinger, M. J. & Rec. **120**:115 (Aug.) 1924.
Vaccination by way of Skin. Combiesco and Popesco, Compt. rend. Soc. de biol. **91**:484 (July 18) 1924.
Virus Herpes. W. Gruter, München. med. Wchnschr. **71**:1058 (Aug. 1) 1924.

Warts. Bonjour, Schweiz. med. Wchnschr. **54**:748 (Aug. 14) 1924.

Xeroderma Pigmentosum in Tunis. Junes et al., Arch. l'Inst. Pasteur Tunis **13**:226 (June) 1924.

Yellow Fever in Brazil. Hideyo Noguchi, H. R. Muller, O. Torres, F. Silva, H. Martins, A. Ribeiro dos Santos, G. Vianna and M. Biao, J. A. M. A. **83**:820 (Sept. 13) 1924.

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Arsphenamin Dermatitis. B. R. Harrell, Virginia Med. **51**:274 (Aug.) 1924.
Arteriosclerosis. J. G. Monckeberg, Klin. Wchnschr. **3**:1521 (Aug. 19) 1924.

Bismuth Treatment of Syphilis. E. Hoffmann, Klin. Wchnschr. **3**:1541 (Aug. 19) 1924.
Blood Reveals Latent Syphilis E. Leredde, Presse méd. **32**:641 (July 30) 1924.

Chancroid in Natives of Algeria. Montpellier and Benzecri, Ann. d. mal. ven., Paris **19**:514 (July) 1924.
Chemotherapy with Bismuth. W. Kolle, Med. Klin. **20**:1097 (Aug. 10) 1924.
Comparison of Wassermann Reactions: Kolmer, Original and Bass-Johns. F. M. Johns and W. E. Jones, New Orleans M. & S. J. **77**:82 (Aug.) 1924.
Congenital Syphilis. L. Findlay, Am. J. Dis. Child. **28**:133 (Aug.) 1924.
Congenital Syphilis of Lymph Glands. H. Kurz, Schweiz. med. Wchnschr. **54**:776 (Aug. 21) 1924.

Diagnosis of Syphilis, Factors in. J. H. Stokes and H. A. Des Brisay, Canad. M. A. J. **14**:715 (Aug.) 1924.

Experimental Prevention of Syphilis. W. Kolle, Deutsch. med. Wchnschr. **50**: 1074 (Aug. 8) 1924.

Flocculation in Diagnosis of Syphilis. Demanche and Guenot, Ann. de l'Inst. Pasteur. **38**:625 (July) 1924.
Flocculation Reactions in Syphilis. J. Hachla, Cas. lek. cesk. **63**:1261 (Aug. 23) 1924.
Flocculation Tests. J. Wegievko, Compt. rend. Soc. de biol. **91**:717 (Aug. 12) 1924.

General Paralysis of Insane. W. E. Jones, M. J. Australia **1**:425 (June) 1924.
General Paresis. S. T. Orton, Iowa S. Med. J. **14**:351 (Aug.) 1924.
General Paresis. C. J. Stuart, U. S. Nav. M. Bull. **21**:68 (July) 1924.
Gold Reaction in Dementia Praecox. Golant-Ratner, München. med. Wchnschr. **71**:1128 (Aug. 15) 1924.
Gonorrhea with Syphilis Chancre in Urethra. Catzeflis. Ann. d. mal. vén., Paris **19**:456 (June) 1924.

Hohn's Modification of the Meinicke Reaction. K. L. Pesch and H. Schutt, München. med. Wchnschr. **71**:1060 (Aug. 1) 1924.

Infection and Immunity in Congenital Syphilis, Mechanism of. J. A. Kolmer, Atlanta M. J. **27**:707 (Aug.) 1924.
Inherited Syphilis. G. Higoumenakis, Ann. d. mal. vén., Paris **19**:324 (June) 1924.

Kahn Precipitation Test, Effect of Contamination and Age of Serum on. P. L. Kendrick, Am. J. Pub. Health **14**:673 (Aug.) 1924.
Kahn's Reaction and the Blood Sugar. F. Bernhard, Klin. Wchnschr. **3**:1402 (July 29) 1924.
Kolmer's New Antigen for Complement Fixation Tests in Syphilis, Stability of. R. A. Kilduffe, J. Lab. & Clin. Med. **9**:781 (Aug.) 1924.
Lange Gold Chlorid Reaction in Infants. C. G. Grulee, Am. J. Dis. Child. **28**:147 (Aug.) 1924.
Latent Paresis. H. Zingerle, Klin. Wchnschr. **3**:1399 (July 29) 1924.
League of Nations and Serodiagnosis of Syphilis. Sachs, Klin. Wchnschr. **3**:1518 (Aug. 12) 1924.

Malaria Treatment of Progressive Paresis. J. M. Moll, South African M. Rec. **22**:288 (July) 1924.
Management of Neurosyphilitic. G. O. Scott and G. H. J. Pearson, Canad. M. A. J. **14**:724 (Aug.) 1924.
Massachusetts' Program for Venereal Disease Control, Some Special Features of. E. R. Kelley and A. Pfeiffer, J. A. M. A. **83**:913 (Sept. 20) 1924.
Meinicke's Turbidity Reaction. G. Bruns, Med. Klinik. **20**:1178 (Aug. 24) 1924.
Meinicke's Turbidity Reaction. W. zur Linden, Deutsch. med. Wchnschr. **50**: 1149 (Aug. 22) 1924.
Meinicke Reaction, Hohn's Modification of the. K. L. Pesch and H. Schutt, München. med. Wchnschr. **71**:1060 (Aug. 1) 1924.

Nature of Arteriosclerosis, Histogenesis and. H. Oertel, Northwest Med. **23**: 339 (Aug.) 1924.
Negative Wassermann in Secondary Syphilis. Ruge, Klin. Wchnschr. **3**:1540 (Aug. 19) 1924.
Neo-Arsphenamin by Way of the Nose. R. Podesta, Semana méd. **2**:212 (July 24) 1924.
Neurorecurrences Under Bismuth. Kislitchenko, Ann. d. mal. vén., Paris **19**:442 (June) 1924.
Neurosyphilis. T. W. Raison, U. S. Nav. M. Bull. **21**:145 (Aug.) 1924.
Neurosyphilis Six or More Years After Treatment. L. Thompson, J. A. M. A. **83**:807 (Sept. 13) 1924.

Paresis, Malaria Treatment of Progressive. J. M. Moll, South African M. Rec. **22**: (July 28) 1924.
Pediatrist and Congenital Syphilis. R. S. Haynes, Atlanta M. J. **27**:702 (Aug.) 1924.
Peritonitis from Congenital Syphilis. J. M. Valdez, Arch. latino-Am. de pediat. **18**:255 (June) 1924.
Phagenedena in Syphilitics. Carle, Ann. d. mal. vén., Paris **19**:506 (July) 1924.
Preparation of Colloidal Gold. C. F. Behrens, U. S. Nav. M. Bull. **21**:191 (Aug.) 1924.
Prevention of Neurosyphilis. G. Pellacani, Policlinico, Rome **31**:1070 (Aug. 18) 1924.
Problems of Syphilis. L. Hauck, München. med. Wchnschr. **71**:1085 (Aug. 8) 1924.

Rabbits' Syphilis, A So-Called. Seitz, München. med. Wchnschr. **71**:1012 (July 25) 1924.
Racial Resistance to Arsphenamin. E. Orphanides, Ann. d. mal. vén., Paris **19**:510 (July) 1924.
Reactivation After Arsphenamin Injections. R. Krefting, Norsk. Mag. f. Laegevidensk. **85**:535 (July) 1924.
Reactivation of Wassermann Reaction. R. Krefting, Paris méd., p. 81, July 26, 1924.
Resistance Reaction in Syphilis. H. Gougerot and F. Fernet, Ann. d. mal. vén., Paris **19**:502 (July) 1924.
Resistant Syphilis. E. Langer, Med. Klinik. **20**:1171 (Aug. 24) 1924.

Source of Error in Colloidal Gold Test. C. Agostini, Policlinico **31**:1036 (Aug. 11) 1924.
Spirochaeta Icterohemorrhagiae. V. Vanni, Policlinico, Rome **31**:966 (July 28) 1924.
Spirochaeta Pallida in Frozen Sections, Demonstration of. G. Armuzzi and R. Strempel, Klin. Wchnschr. **3**:1534 (Aug. 19) 1924.
Spirsil Stain for Spirochetes. W. Krantz, Klin. Wchnschr. **3**:1559 (Aug. 19) 1924.
Staining of Spirochaeta Pallidum by Noguchi Method for Diagnosis of Syphilis. G. A. M. Hall and C. N. Frazier, China M. J. **38**:558 (July) 1924.
Staining of Spirochetes. F. W. Oelze, Deutsch. med. Wchnschr. **50**:1151 (Aug. 22) 1924.
Syphilis. W. W. Graves, Missouri M. A. J. **21**:179 (June) 1924.
Syphilis of the Bladder. C. A. and E. Castano, Rev. Asoc. méd. argent. **37**:5 (June) 1924.
Syphilis in Colored and White Women with Mental Disorder. L. D. Hubbard, Arch. Neurol. & Psychiat. **12**:198 (Aug.) 1924.
Syphilis of Epididymis. J. C. Rolnick, J. Urol. **12**:147 (Aug.) 1924.
Syphilis from Medicolegal Standpoint. G. Thibierge, Presse méd. **32**:649 (Aug. 2) 1924.
Syphilis Relation to Gastric Disorders. F. S. Hone, M. J. Australia **1**:629 (June 28) 1924.
Syphilis in Sanatorium for the Tuberculous. F. Koester and S. Amend, Ztschr. f. Tuberk. **40**:437 (July) 1924.
Syphilis, Unsuspected. J. Golay, Rev. méd. de la Suisse Rom. **44**:449 (July) 1924.
Syphilitic Aortitis. W. H. Marshall, J. Michigan M. Soc. **23**:324 (Aug.) 1924.
Syphilitic Aortitis; Complications. H. B. Haskell, Northwest Med. **23**:345 (Aug.) 1924.
Syphilitic Arthritis with Eosinophilia: Recovery of T. Pallidum from Synovial Fluid. A. M. Chesney, J. E. Kemp and W. H. Resnik, Bull. Johns Hopkins Hosp. **35**:235 (Aug.) 1924.
Syphilitic Jaundice One Month After Infection. Bottema, Nederl. Tijdschr. v. Verlosk. en Gynaec. **2**:653 (Aug. 2) 1924.
Syphilitic Mesaortitis. G. Spengler, Med. Klinik. **20**:1137 (Aug. 17) 1924.
Syphilitic Meningitis and Second Generation of Inherited Syphilis. A. Guerricchio, Policlinico, Rome **31**:972 (July 28) 1924.
Syphilitic Stigmas. N. Hensen, Deutsch. med. Wchnschr. **50**:1147 (Aug. 22) 1924.

Technic of Sedimentation Test. M. Henkel, Deutsch. med. Wchnschr. **50**:1138 (Aug. 22) 1924.
Theory of Wassermann Reaction with Special Reference to Analogous Specific Reaction Between Heterophile (Forssman) Antibody and Tissue Lipoids. T. Taniguchi, Japan M. World **4**:172 (July 15) 1924.
Tissue Changes After Bismuth. R. Jaffe, Med. Klinik. **20**:1135 (Aug. 17) 1924.
Tracheocele from Congenital Syphilis. D. S. Cuneo, Prensa. méd. argentina (July 30) 1924.
Treatment of Neurosyphilis with Tryparsamide. H. Claude and R. Targowla, Compt. rend. Soc. de biol. **91**:527 (July 25) 1924.
Treatment of Syphilis. R. Griesbach and E. Meyerhoff, München. med. Wchnschr. **71**:1089 (Aug. 8) 1924.
Treatment of Syphilitic Aortitis. G. Wodtke, Deutsch. Arch. f. klin. Med. **144**:351 (July) 1924.
Tryparsamide in Neurosyphilis, Paresis and Taboparesis. S. S. Hindman, Ohio State M. J. **20**:496 (Aug.) 1924.
Tryparsamide in Neurosyphilis, Use of. W. F. Lorenz, A. S. Loevenhart, T. F. Reitz and C. P. Eck, Am. J. M. Sc. **168**:157 (Aug.) 1924.
Tryparsamide in Neurosyphilis. N. Viner, Canad. M. A. J. **14**:719 (Aug.) 1924.
Tryparsamide and Other Drugs in Treatment of Neurosyphilis. H. C. Solomon and H. R. Viets, J. A. M. A. **83**:891 (Sept. 20) 1924.

Tryparsamide in Syphilis of Central Nervous System: Observations from Ophthalmologic Standpoint. W. I. Lillie, J. A. M. A. **83**:809 (Sept. 13) 1924.

Tryparsamide Therapy in Syphilis, the Results of. J. E. Moore, H. M. Robinson and R. S. Lyman, J. A. M. A. **83**:888 (Sept. 20) 1924.

Tryparsamide in Treatment of General Paralysis. F. G. Ebaugh and R. W. Dickson, J. A. M. A. **83**:803 (Sept. 13) 1924.

Typhoid and Syphilis in Infant. D. Vischer, Schweiz. med. Wchnschr. **54**:706 (July 31) 1924.

Venereal Disease and Abnormal Mind. W. A. T. Lind, M. J. Australia **1**:409 (June 14) 1924.

Virulent Smallpox in Windsor, Epidemic of. F. Adams, Canad. M. A. J. **14**:692 (Aug.) 1924.

Wassermann's Reaction in Active Tuberculosis. Kalcher and Sonnenfeld Ztschr. f. Tuberk. **40**:420 (July) 1924.

Wassermann Reaction. C. F. Behrens, U. S. Nav. M. Bull. **21**:72 (July) 1924.

Women with Mental Disorder, Syphilis in Colored and White. L. D. Hubbard, Arch. Neurol. & Psychiat. **12**:198 (Aug.) 1924.

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